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- 7. Fortifications and Cult Practices
- 8. Babylonian Exile and the Persian Restoration
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- 12. The Hasmonean Kingdom
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- 15. The Sectarian Settlement at Qumran
- 16. The Dead Sea Scrolls and the Essenes
- 17. The Life of the Essenes
- 18. From Roman Annexation to Herod the Great
- 19. Herod as Builder—Jerusalem's Temple Mount
- 20. Caesarea Maritima—Harbor and Showcase City
- 21. From Herod's Last Years to Pontius Pilate
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- 23. Synagogues in the Time of Jesus
- 24. Sites of the Trial and Final Hours of Jesus
- 25. Early Jewish Tombs in Jerusalem
- 26. Monumental Tombs in the Time of Jesus
- 27. The Burials of Jesus and James
- 28. The First Jewish Revolt; Jerusalem Destroyed
- 29. Masada—Herod's Desert Palace and the Siege
- 30. Flavius Josephus and the Mass Suicide
- 31. The Second Jewish Revolt against the Romans
- 32. Roman Jerusalem—Hadrian's Aelia Capitolina
- 33. Christian Emperors and Pilgrimage Sites
- 34. Judaism and Synagogues under Christian Rule
- 35. Islam's Transformation of Jerusalem
- 36. What and How Archaeology Reveals

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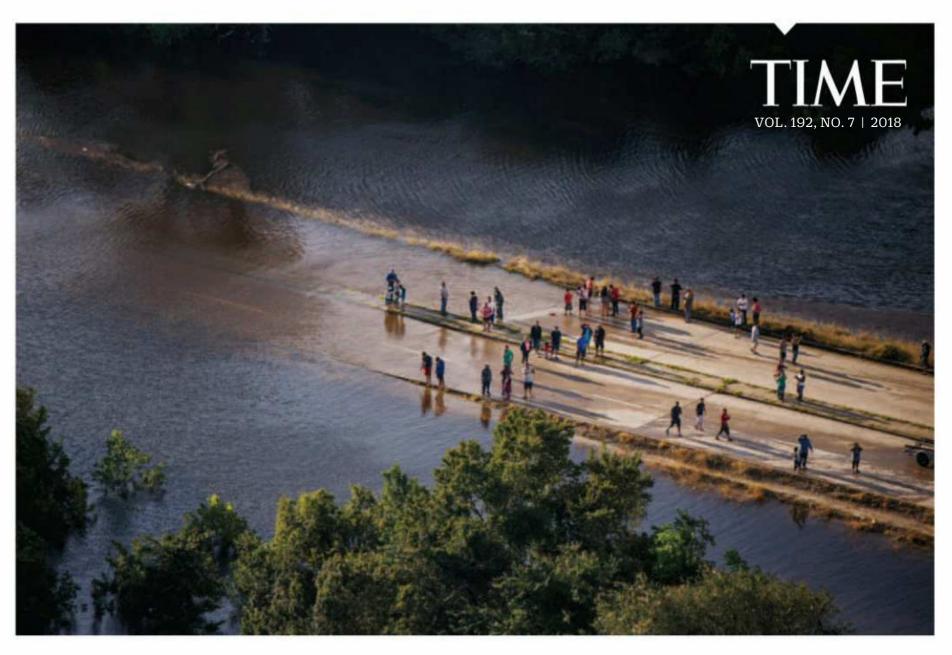
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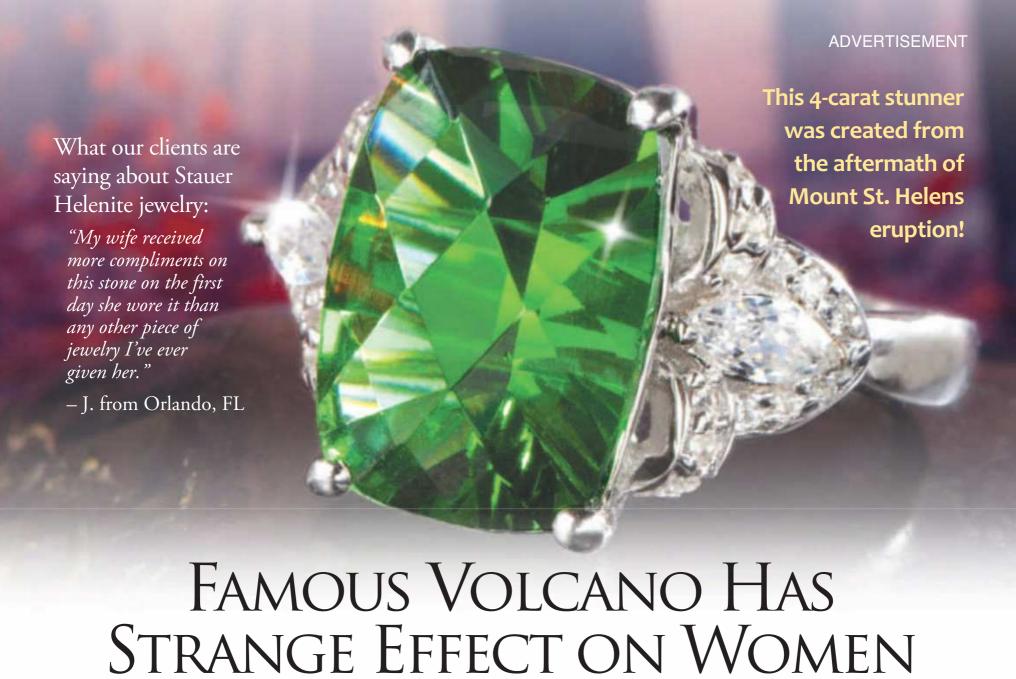
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Houston residents survey areas flooded by Hurricane Harvey in 2017. A groundbreaking weatherforecasting model should help U.S. meteorologists better predict catastrophic storms

Photograph by Marcus Yam— Los Angeles Times/ Getty Images

**ON THE COVER:**Photograph
by Carrie Mae
Weems for TIME

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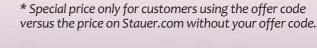
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#### Conversation



#### WHAT YOU SAID ABOUT...

**THE SOUTH ISSUE** The Aug. 6/Aug. 13 special issue on the American South spoke to readers from the region and beyond. Bill Tuminello of Fort Collins, Colo., said his view of the South had been "guided by the stereotypes,"

so he was "amazed at the diversity" and "the many reasons why people love the area." Jeff Klein of Arlington, Va., hailed Jesmyn Ward's accompanying essay for managing "to pluck poetry from prejudice and pain." But Alphonse Kolodziejc-

This issue should be read in every school in the country.

**ADELLE ABRAHAMS**, Phoenix

zak of Williamsville, N.Y., found David
French's characterization of Southern politics
and the Democratic Party "simplistic." And
Brandon Simmons of Forney, Texas, critiqued
what he saw as undue emphasis on progressive politics in the issue, as many of those profiled seemed to him to be succeeding not because of political change but "a dynamic free
market that is remaking the Southern states."

**THE SUMMIT CRISIS** The composite image of Donald Trump and Vladimir Putin on the July 30 cover was jokingly dubbed "Vladon-

'Putin is
definitely
in charge
in this
composite
picture. See
him, not
much of
Trump!'

ELLIOTT KOENIG, Palm Beach Gardens, Fla.

magazine to focus instead on why so many Republicans "still support him."

ald Trumputin" by Jerry Steinberg of Surrey, British Columbia, but Larry Schultz of Bellevue, Wash., objected to the portrayal as "fearmongering." When the cover was shown on The View, the audience gasped. Whoopi Goldberg called it "a bad trip," but co-host Meghan McCain said it felt like Groundhog Day to see Trump on the cover again and urged the



**BEHIND THE COVER** For this week's cover, filmmaker Spike Lee sat for photographer Carrie Mae Weems, a 2013 MacArthur "genius" grant winner and the first African-American woman to have a retrospective of her work at the Guggenheim Museum in New York City. Weems, who is best known for her 1990 "Kitchen Table" series, has said that an artist's "obligation" is to "make what you want to see in the world." See more at **time.com/spike-lee-cover** 



war on Drugs As the U.S. faces its opioid epidemic, TIME's deputy international editor Naina Bajekal looks at what might be learned from Portugal, the first country to decriminalize the consumption of drugs. Photographer Gonçalo Fonseca captured efforts to reach addicts there, and he says one lesson is "to treat people with more dignity." More at time.com/portugal-drugs



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time.com/email

**SETTING THE RECORD STRAIGHT** In For the Record (July 30), we mischaracterized Blake Shelton's tumble during a recent concert. He fell onstage, not off the stage. In that same issue, in Milestones, we misstated Jeff Bezos' first job. It was at a telecommunications startup.

#### TALK TO US

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## 'He would never admit to me what he was doing, because he loved me so much.'

**ALIA GHANEM,** 

Osama bin Laden's mother, to the Guardian, in a rare interview about the sponsor of the Sept. 11, 2001, attacks

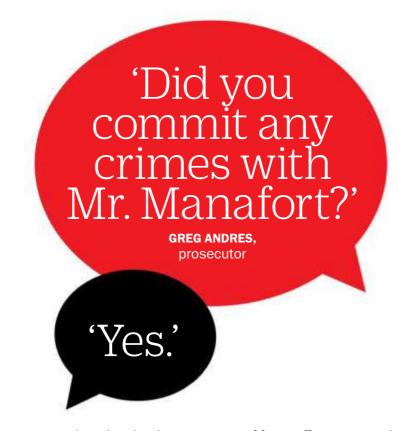
#### 38 days, 6 hours and 49 minutes

Time it took Cincinnati teacher Bryce Carlson to **row solo across the Atlantic** from St. John's, Newfoundland, to St. Mary's in the Isles of Scilly in southwest England, setting a record for west-to-east crossing

#### 'l accepted what my body wanted to be.'

#### BEYONCÉ,

singer, on life post-pregnancy in the September issue of *Vogue* 



RICK GATES, longtime business partner of former Trump campaign chairman Paul Manafort's, in federal court in Alexandria, Va.; Gates testified to not disclosing foreign bank accounts "at Manafort's request" on the fifth day of Manafort's trial for tax and bank fraud

#### 'Well, that's enough.'

#### ROBERT REDFORD,

actor, on his decision to retire from acting after six decades; the 81-year-old Oscar winner confirmed to *Entertainment Weekly* that the upcoming *The Old Man & The Gun* would be his last movie

**13** 

Measure, in feet, by which Sweden's tallest peak, Kebnekaise, **shrunk in height in July** during a glacier-melting heat wave



# 'IF THE NRA GOES BANKRUPT BECAUSE OF THE STATE OF NEW YORK, THEY'LL BE IN MY THOUGHTS AND PRAYERS.'

#### ANDREW CUOMO,

governor of New York, reacting to a National Rifle Association claim that it has lost millions since the state urged businesses to cut ties with it



**240** 

Number of students attending the I Promise School in Akron, Ohio, which is being bankrolled in part by NBA star LeBron James; the new public school, which opened on July 30 to third- and fourth-graders, provides each student with, among other perks, a bike and scholarships to the University of Akron

#### Medal

A Fields Medal, the top math prize, was stolen minutes after being awarded



#### Metal

Two missing
German nursinghome residents
were found—at a
heavy-metal festival



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# **TRENDING Gretchen Whitmer** won the Democratic primary for Michigan governor on Aug. 7, another big night for female candidates INSIDE

SAUDI ARABIA KEEPS CLOSING DOWN ITS OPENING TO THE WORLD BRITAIN PREPARES FOR THE POSSIBILITY OF A "NO DEAL" BREXIT

REMEMBERING CHEF JOËL ROBUCHON'S IMPACT ON THE WORLD OF FINE DINING

# PREVIOUS PAGE: DETROIT NEWS/AP; THIS PAGE: ANTHONY LANZILOTE—THE NEW YORK TIMES/REDUX

#### TheBrief Opener

**POLITICS** 

#### Women win big, again

By Charlotte Alter/Detroit

THE NIGHT BEFORE HER PRIMARY ELECTION, HALEY Stevens rang the doorbell at a neat brick house in Canton, Mich. It was pouring rain, but the Democratic candidate in the state's 11th Congressional District was still canvassing. The homeowner, Marybeth Levine, recognized Stevens immediately: she had received a robocall from Hillary Clinton endorsing the former chief of staff of President Obama's auto task force, and she was planning to vote for Stevens and a handful of other Democratic women on the ballot. "All the blue women," Levine said, "are coming to fix the stuff the men broke."

If there was a message from the spate of elections in five states on Aug. 7, it's that Democrats are heading into November with the wind at their backs, led by a record-setting number of female congressional candidates and the fury of female voters. Stevens was one of four Democratic women to win key races in Michigan alone. In the state's eighth district, former acting Assistant Secretary of Defense Elissa Slotkin won a House primary, while former state representative Rashida Tlaib was the party's pick in a Detroit-area district with no declared Republican candidate.

no declared Republican candidate.
Former state senator Gretchen
Whitmer won the Democratic
gubernatorial primary, bringing the
total number of female gubernatorial
nominees nationwide to a record-setting

11, eight of whom are Democrats.

There are signs across the country that Democratic voters have been galvanized by President Trump. Even in contests where Democrats appeared to come up short, there were alarm bells for Republicans. In a special election for Ohio's 12th Congressional District, a conservative swath of Columbus suburbs that the GOP has controlled since 1983, Democrat Danny O'Connor was locked in a nail biter with Republican candidate Troy Balderson. Balderson held a narrow advantage with 100% of precincts reporting, but the race remained too close to call on Aug. 8 and could be headed for a recount. It was yet another election during this cycle in which Democrats have outraised the GOP, and one in a series of special elections in which the party overperformed in a conservative district. "This remains a very tough political environment," says GOP strategist Corry Bliss, executive director of the

Congressional Leadership Fund, a super PAC working to keep the Republican House majority. "Moving forward, we cannot expect to win tough races when our candidate is being outraised."

**IT WAS A REMINDER** that a blue wave is looming. History says the minority party should surge in November, but whether Democrats regain the House majority may depend on tactics and turnout strategies that the party is fiercely debating.

Those debates were on display at Netroots Nation, the conference of progressive activists held in a New Orleans convention center in early August. Long on idealism, attendees debated whether the Democrats should bother catering to white moderate voters at all. Emboldened by Doug Jones' Senate victory in Alabama and Stacey Abrams' gubernatorial nomination in Georgia, many organizers argued that the best strategy was to focus on turning out members of the Democratic base—young people, nonwhite voters and white liberals—who have a spotty record of showing up in midterm contests.

"Democrats' job is not to convince someone who voted for Trump to vote for us," says Aimee Allison, founder of She the People, which focuses on mobilizing women of color in politics. "We actually don't need those

people. Our swing voters are from nonvoter to voter."

But the Aug. 7 contests offered evidence that a message geared purely to progressives won't work everywhere. Left-wing candidates lost primaries to establishment-supported rivals in Michigan, Missouri and Kansas. O'Connor's strong showing in Ohio came as he ran toward the center, rejecting the idea of single-payer health care and vowing to "fight for capitalism" while campaigning with his Republican fiancée. All of which suggests that the strategy most popular with left-wing activists may not pay off in November.

Democrats need to pick up 23 seats to win back the House, and there are dozens of GOP-controlled districts that are less conservative than the Columbus-area seat that O'Connor is contesting. The party out of power typically picks up seats in midterm elections even in years when the President is not such an animating force. But some Democrats warn that ignoring the voters who swung to Trump in 2016 would be a big mistake.

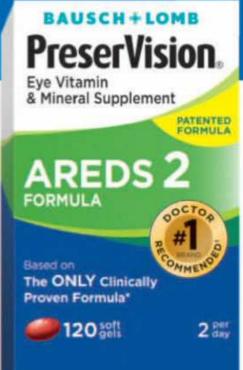
"There's a sentiment that if you voted for Trump once, we're done with you," says John Fetterman, the mayor of Braddock, Pa., a Bernie Sanders ally who is running for lieutenant governor. Plenty of those white voters, he says, remain persuadable. But Democrats have to make the pitch. "Can Democrats win without the white working class?" he asks. "Why would we want to find out?"



Democratic nominee
Rashida Tlaib will
run unopposed in
November, making
her likely to be the
first Muslim woman
in Congress







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**SCORCHED EARTH** A group of firefighters observe a backfire while battling the Ranch Fire on Aug. 7 near Lodoga, Calif. The blaze is part of the biggest wildfire in state history; in about two weeks, it had already burned more than 300,000 acres and over 100 homes.

THE BILL ETIN

#### Saudi Arabia says it wants to modernize—but brooks no criticism

A DIPLOMATIC SPAT BETWEEN SAUDI Arabia and Canada escalated on Aug. 6, after the Canadian Foreign Minister called for the release of women's-rights activists jailed in Saudi Arabia. In response, Saudi Arabia expelled Canada's ambassador, paused all new trade and investment and declared that some 15,000 Saudi students on government-funded scholarships would be transferred out of Canada. The uproar follows—and does no service to—the kingdom's effort to show the West a new, more modern face.

contradictory kingdom Praised in the West as an ambitious young reformer, Saudi Arabia's Mohammed bin Salman has been slowly peeling back restrictive laws since he became crown prince last year. For example, he lifted the country's ban on female drivers and allowed movie theaters to reopen after 35 years. Being a reformer is not the same as being a democrat, however. Since May, the kingdom has also led an "unprecedented government crackdown" on activists, according to Human Rights Watch (HRW).

FOREIGN POLICY FALLOUT The tactics used against Canada aren't new for Saudi Arabia. In March 2015, after Sweden's Foreign Minister criticized the flogging of blogger Raif Badawi, the kingdom recalled its ambassador and blocked business visas for Swedish nationals. And in November, Germany's Foreign Minister made a veiled criticism of Saudi Arabia's military intervention in Yemen and endured blowback, including blacklisting of some German companies.

GLOBAL REPERCUSSIONS Under President Trump, the U.S. has been far less vocal about human rights in Saudi Arabia than in the past—making it tricky for less powerful countries to speak out, especially when lucrative trade deals are at risk. Canada says it doesn't regret defending human rights, but advocates see little likelihood of other countries following suit. Sarah Leah Whitson, HRW's Middle East director, says most have "been willing to look the other way." Modern or medieval, the kingdom appears intent on remaining an absolute monarchy. —BILLY PERRIGO

#### NEWS

#### Major earthquake hits Indonesia

A 6.9-magnitude
earthquake on
Indonesia's Lombok
island left at least 131
people dead and nearly
1,500 seriously injured,
with those numbers
expected to rise.
Officials said the Aug. 5
quake destroyed 80%
of buildings in the
mountainous northern
region, home to
200,000 people.

#### Apple reaches \$1 trillion valuation

Apple became the first publicly traded American company to be worth more than \$1 trillion. Analysts had considered Amazon to be its main competitor in reaching the milestone. While Apple got there first—on Aug. 2—Google's parent company, Alphabet, is also close behind.

#### Crackdown follows vote in Zimbabwe

Days after narrowly winning **Zimbabwe's** first elections since the removal of **Robert Mugabe last** fall—a result that his electoral opponent Nelson Chamisa called "fraudulent"-President Emmerson Mnangagwa launched a crackdown on opposition figures. Human-rights groups reported abductions and beatings.

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#### The Brief News

#### NEWS

#### West Virginia to pioneer mobile voting

November's midterms will mark the first time U.S. citizens can cast federal-election ballots using a smartphone app. West Virginia has said it will allow those serving overseas to vote via mobile app, despite concerns about security in light of Russian attempts to interfere with U.S. elections.

#### Road deaths spark protests in Bangladesh

Mass demonstrations over road safety gripped Bangladesh for more than a week after a speeding bus killed two teenage students in Dhaka on July 29. The protests, which were dominated by young people, went on despite promises of harsher sentences for those who cause accidents.

#### Missouri rejects 'right to work' law

In an Aug. 7 vote,
Missourians
overwhelmingly
rejected Proposition A,
which would have
prevented unions from
collecting dues from
employees who are
represented but opt
out of membership.

The vote dealt a strong blow to Republicans, who have long tried to make Missouri a "right to work" state.

**GOOD QUESTION** 

## Britain is preparing for a 'no deal' Brexit. What does that mean?

THE POSSIBILITY OF THE U.K.'S LEAVING THE E.U. without an explicit understanding of what comes next—a "no deal" Brexit—is beginning to look increasingly likely. On Aug. 3, Mark Carney, the governor of the Bank of England, called the level of risk "uncomfortably high." Two days later, Britain's International Trade Secretary Liam Fox said that Britain's leaving with no deal was the most likely scenario, causing the pound to plummet to an 11-month low against the dollar.

Prime Minister Theresa May, most U.K. lawmakers and the country's business leaders say Britain needs a deal. The E.U. is Britain's biggest trading partner, accounting for 44% of all U.K. exports; as a member state, Britain can enjoy free trade and zero customs restrictions with the 27 other members. When Britain leaves, that will no longer be the case.

So May's government is negotiating with E.U. leaders what Britain's relationship with the bloc will look like post-Brexit. Those negotiations started a few weeks after May triggered a never-before-tested legal instrument known as Article 50 on March 29, 2017—giving Britain exactly two years to figure it out. That deadline will pass in just over seven months, but in reality, May has even less time. Negotiators believe a deal must be finalized by October, about two months away, to give law-makers in the U.K. and Europe enough time to ratify it. Talks have been slowed by divisions within May's cabinet and what the U.K. sees as

intransigence on the part of E.U. negotiators.

If the deal cannot be finalized or if parliaments reject the final text, Britain would tumble out of the E.U. on March 29, 2019, without trade or customs agreements in place. But if the definition of a no-deal Brexit is clear, the consequences are complicated—and frightening. Already business lobby groups warn such a departure could cause chaos at the U.K. border, plus food and medicine shortages, while lawmakers say the rights of both British and E.U. citizens may be thrown into uncertainty.

Roughly 30% of the food Brits eat daily comes from the E.U. If Britain fails to secure an exit deal, supply chains designed to put fresh food in stores could grind to a halt within hours as customs barriers are hastily erected. The result would be food rotting in the backs of trucks, and reduced choice—and higher prices—for British consumers. Customs and regulatory problems could hit medicines too; Britain's National Health Service is preparing to stockpile drugs and blood supplies.

At the end of August, the U.K. government will release detailed guidance to businesses on what will happen in a no-deal scenario. May hopes that preparing for this outcome will incentivize European leaders to give her a deal she can confidently present to the British Parliament after October. Meanwhile, senior ministers have been trying to persuade foreign leaders across Europe to cut Britain some slack. "At the moment we are heading for no deal by accident," Foreign Secretary Jeremy Hunt told his Austrian counterpart on Aug. 1.

But with a polarized party, a narrow parliamentary majority and a hard deadline, May has very little margin for error. And the Brexit countdown clock is ticking.—BILLY PERRIGO

#### **ENVIRONMENT**

#### Sustainable sites

More than 5,500 U.K. churches, including Liverpool Cathedral (below), have switched to renewable energy to combat climate change. Here, other landmarks going green.

—Abigail Abrams

mausoleum and 100 other sites in India went "litter free" in June with a pledge to get rid of all litter for 500 meters around the building and an awareness campaign aimed at warning about the dangers of singleuse plastics.

**TAJ MAHAL** 

The iconic

#### **COAL MUSEUM**

The Kentucky Coal
Mining Museum
in Harlan County
switched to solar
power last year to
save on energy bills.
The owners said
they recognized the
irony but installed
solar panels anyway
and said the two
kinds of energy
could work together.

#### ACADEMY OF SCIENCES

The California
Academy of
Sciences was billed
as the world's
greenest museum
when it reopened in
2008. In 2011, it
acquired a second
LEED Platinum
certification,
becoming the
world's first "Double
Platinum" museum.

Actor **Charlotte Rae,** best known
for her role on the
hit sitcoms *Diff'rent*Strokes and *The*Facts of Life, on
Aug. 5 at 92.

#### **INDICTED**

New York
Representative Chris
Collins, on insidertrading charges, by
federal prosecutors
on Aug. 8. Collins, the
first sitting member
of Congress to
endorse President
Trump, turned himself
in to the FBI.

#### FINED

A 28-year-old woman in Denmark, after she **refused to remove her niqab** when police asked her to do so on Aug. 3. She became the first person in the country to face a fine for violating a new law banning full-face veils in public.

#### **NAMED**

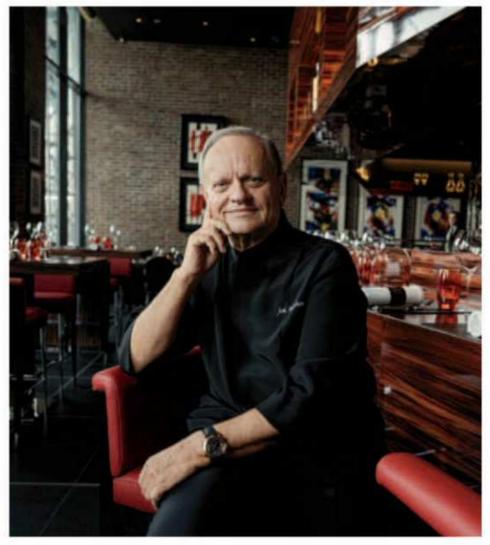
Jean-Henry Céant, as the new **Prime Minister of Haiti,** on Aug. 5, weeks after violent protests forced the country's previous Prime Minister to resign.

#### **LAUNCHED**

An investigation into powerful evangelical leader Bill Hybels, by the church he founded, Willow Creek Community Church near Chicago, after multiple women accused him of sexual harassment. He has denied their claims.

#### ANNOUNCED

A new Oscars
category to
recognize "popular"
movies, by the
Academy on Aug. 8.
The move was seen
as a bid to boost the
award show's ratings.



Robuchon at his restaurant L'Atelier de Joël Robuchon in Manhattan, on Oct. 23, 2017; the chef reached 32 Michelin stars

#### DIEL

#### **Joël Robuchon**Dean of haute cuisine

By Daniel Boulud

LIÈVRE À LA ROYALE—THAT'S THE DISH I REMEMBER FROM MY first time at Joël Robuchon's Jamin. It was 1982, so the restaurant was still new. He had only the one Michelin star. By the time Robuchon died on Aug. 6 at age 73, he had won more than 30.

In the classic version of the dish, wild hare is rolled and stuffed with foie gras and truffles. But Robuchon had shredded the meat and made the dish more subtle. It was still classical but reinvented. That's what he would become known for: reinventing French cuisine while respecting its traditions.

He was known to be very demanding; if you chose to go work with him, you knew it wasn't going to be a family-style restaurant. It was a no-pain, no-gain kind of place. But the cooks I know who worked for him say the experience was worth it. Universally, chefs have extreme respect for what he represented: perfection.

When Robuchon retired at age 50, it was a shock. It was a very gutsy move, but it enabled him to reinvent himself in 2003 with L'Atelier, which was more casual and accessible. But he wasn't done with Michelin-style cooking; the attention to detail at his Las Vegas restaurant, for example, was incredible to experience.

Food writer Patricia Wells called him the most important chef of the 20th century. She was right.

**Boulud** is a French chef and restaurateur

#### **ANNOUNCED**

### Indra Nooyi's retirement Pepsi CEO to go

IN 1996, INDRA NOOYI WAS all set to go run European operations for PepsiCo. Her house was rented, her kids were in school. But then CEO Roger Enrico forbade it. He had plenty of executives to manage profit and loss, he said. He needed her for something bigger: reconceptualizing the whole company.

Nooyi ended up as CEO, serving a 12-year stint—but announced on Aug. 6 that she would leave the beverage and snack giant in 2019. Famously averse to sleep (she claims to rest four hours a night and "get up every hour and answer email"), Nooyi, 62, said she's tired and wants to attend to her mother.

Under her watch, PepsiCo became a more global operation, increased its socialconsciousness footprint and adopted some healthier options into its chip-and-sip portfolio. At a time when female CEOs remain rare, her long and mostly successful reign—and her willingness to own what it cost her and her family—has made her into an icon of women's leadership. Critics point to the slippage of the eponymous cola's market share, but that may have been part of her strategy. As CEO, she has said, "you have to be willing to think destructively."

—BELINDA LUSCOMBE



#### The Brief TIME with ...

#### Stacey Cunningham,

head of the New York Stock Exchange, talks history as she changes it

By Lucy Feldman

GROWING UP, STACEY CUNNINGHAM THOUGHT her father was a sock trader. He was in fact a *stock* trader and hung a LeRoy Neiman painting of the New York Stock Exchange floor in his den. Now Cunningham is president of the exchange—the first woman to run the organization since its founding in 1792.

Eight weeks into the top job, Cunningham works the iconic floor of the exchange—which, even today, has only one full-time female trader—as the showcase for American capitalism it has remained, even in the digital age. It's the day of an initial public offering, and the boss plants herself at the front of a sea of traders watching screens. Men in blue jackets pace well-worn floorboards, frowning and calling out bids as the designated market maker zeroes in on the opening price for a clean-energy company. With Cunningham at his side, Bloom Energy CEO K.R. Sridhar stands by, waiting to discover what his company is worth to the public.

"We throw a party," Cunningham explains, as she moves between the ceremonial duties she carries out for each IPO. First there was the breakfast in the gilded Board Room, where she spoke about the historical significance of the NYSE. Then came the ringing of the opening bell, when she ushered Sridhar and his top crew, including former Secretary of State Colin Powell, a Bloom Energy board member, onto the compact marble platform that overlooks the trading floor. When the bell rang at 9:30 a.m. sharp as it always does, Powell leaned over the railing to take a video of the crowd, and Cunningham joined the team in fist-pumping cheers.

These occasions serve as a reminder that equities trading once required a human touch. Now computers do the vast majority of the work in trading stocks across the globe. Even Cunningham admits that human traders are more of a luxury—though she and surrounding team members are quick to describe those traders' benefits: she argues that a human watchdog can consider real-time factors in a way algorithms cannot, which leads to less volatility and more "investor confidence." A big part of Cunningham's job is advocating for the necessity of an in-person exchange.

#### **CUNNINGHAM QUICK FACTS**

#### **Early start**

Cunningham interned at the NYSE in 1994 and joined fulltime in '96.

#### **Quick detour**

She took a break from finance to complete culinary school, part of which required working in the now closed New York City restaurant Ouest.

#### Firsts

The NYSE was founded in 1792. Muriel Siebert became the first female member in 1967 and Cunningham the first female president in 2018.

MURIEL SIEBERT BECAME the first female member of the NYSE in 1967, after being turned away by the first nine men she approached to sponsor her. At the time, there was no women's bathroom on the seventh-floor Luncheon Club. Eventually, the organization built one—inside an old phone booth. When Cunningham first set foot on the exchange floor as an intern in 1994, that single-stall bathroom was still there. "The New York Stock Exchange history runs back 226 years," says Cunningham, throwing on a blue leather jacket over her dress in an ice-cold meeting room. "Women have not been a big part of that history."

Cunningham, one of six children, didn't grow up expecting to work in finance. But when she needed a summer job and couldn't land a waitressing gig as she'd hoped, her father helped her get the NYSE internship. "For anybody, the first time walking down to the trading floor, there's a little bit of awe," she says. Amid the hustle of the floor, she discovered a work-hard, play-hard community that felt like home. Two years later, after graduating from Lehigh University with a degree in industrial engineering, Cunningham headed back to Wall Street and joined the exchange as a trading-floor clerk.

Her first week started with a test. They wanted her to start on Monday; she asked for Wednesday. "They sent the head of the firm over to intimidate me," Cunningham recalls. "He was trying to say, 'So, you can't start until Wednesday. Why is that?' I just decided in that moment I was going to set a tone with these guys going forward." Cunningham looked him straight in the eye and cracked, "Well, my astrologer told me that Wednesday was a better day to start new ventures." The would-be enforcer laughed and told her she'd do just fine on the floor.

Still, it wasn't always easy being "the girl," Cunningham says. That's what many of her colleagues called her—sometimes sweetly, sometimes with disdain. She was one of 30 or so women, compared with about 1,300 men. She had to set boundaries, even if it meant defending double standards of her own making; it was O.K. for a friend, but not a condescending co-worker, to call her "the girl." She took a peer's advice: "You tell them they're not allowed to cross the line unless they're invited over the line." For the most part, she says, she felt respected for walking into a maledominated world. "Being outnumbered can cut both ways," she says. "I played my own game."

After nine years on the NYSE floor, Cunningham took a detour to pursue an old dream: cooking. She completed a nine-month culinary-school program, part of which required working in a restaurant. Kitchens, much like the exchange floor, are often chaotic, aggressive and dominated by men—and require the same attitude to get by. "It's a communication style. It's being direct. It's being





quick," she says. Cunningham brought those lessons back to finance, working in sales roles at NYSE competitor NASDAQ from 2007 to '11, before returning to the NYSE in '12. She became COO in '15 and took the top spot this past spring, breaking a glass ceiling. (Another woman, Catherine Kinney, was once co-president, but the role was lower in the hierarchy at the time.)

Cunningham works from 8 a.m. to 8 or 9 p.m. each day. She wakes up thinking about the markets and goes to sleep doing the same, taking an occasional break to dine at L'Artusi, her favorite restaurant in the city. She's single and doesn't have kids—two things many have asked her about since she entered the public eye. "People feel like if there's a woman in her 40s who isn't married and doesn't have children, it was a conscious decision," she says. "For me, it wasn't the way my life unfolded."

**TONY BLAIR IS DUE** after lunch. The former British Prime Minister will give an interview about Brexit, Vladimir Putin and Theresa May with

'Being outnumbered can cut both ways ... I played my own game.'

STACEY
CUNNINGHAM,
on being one of
about 30 women
at the NYSE
in the 1990s,
compared with
1,300 men

CNBC, one of 35 media outlets with positions on the exchange floor. He'll record a podcast with NYSE staff. And he'll sit down with Cunningham.

Heads of state as well as other political and business leaders make frequent appearances on Cunningham's schedule. The Prime Minister of Ireland was here to ring the opening bell just two weeks back. "We're talking about how we are driving global capital markets," Cunningham says of these visits. "When there's a global event that occurs, the world looks to the New York Stock Exchange to see how the markets are going to react."

When Cunningham's appointment was announced, congratulations from across the world flooded in. She has been asked to pose in a lot of selfies. The female leadership at J.P. Morgan sent a handwritten note that she cherishes. But the best gift was from her father: the retired stock broker presented his daughter with his prized Neiman painting. It hangs in her living room, a reminder of what she has achieved. Says Cunningham: "It means more to me to be the president of this place than it means to me to be the first woman."







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# TheView

**WORLD** 

#### DEMOCRACY'S AGING PROBLEM

**By David Runciman** 

Images of suffering children have a unique power in politics. They forced the Trump Administration to end its policy of ripping migrant children from their parents at the southwest border. In 2015 a photo of a dead 3-year-old who drowned trying to reach Greece also inspired policy changes across Europe. But the goodwill did not last.

INSIDE

WHAT MONICA LEWINSKY'S 1998 GRAND-JURY TESTIMONY REVEALS ABOUT TODAY WHY SANCTIONS AREN'T ALWAYS SUCH A GOOD IDEA THE LIMITS OF THE POPE'S DEATH-PENALTY PRONOUNCEMENT

#### The View Opener

Three years on from that awful image of the late Alan Kurdi lying facedown on a Turkish beach, the wave of sympathy in Europe has almost entirely vanished. The politics across the Continent are now more toxic and divisive than they were before. Italy's hardline Interior Minister Matteo Salvini insists that his country's ports are closed to all new arrivals. Angela Merkel's 2015 decision to open up Germany's borders to hundreds of thousands of refugees has provoked strong backlash. Her own coalition partners have threatened the survival of her government unless she changes course. Sebastian Kurz in Austria and Viktor Orban in Hungary are united by their contempt for Merkel's decision. She assumed that where Germany led, others would follow. She was wrong.

The European experience shows that temporary measures, especially if hastily adopted to answer outrage, do not fix the problem.

They can even make it worse. And if it takes the sight of tormented children to move us to act, there is little prospect of a lasting solution, because we will be forever at the mercy of our emotional responses to passing events instead of durable values.

numbers
BUT BY FIXATING on the sufferings of the young, we ignore the
bigger picture: what makes immigration such youn
a difficult issue for today's democracies to youn
resolve is the attitude of the old.

Ours are the first major societies in history where the elderly dominate the youth simply by weight of numbers. Stretching back to ancient Greece, democracy was always primarily a politics for young people. The constitutional safeguards that were put in place sought to protect against their excesses.

Now many aging Western societies are in desperate need of an influx of youth. This is particularly true for Southern European countries like Italy and Greece, where falling birth rates mean that the population is rapidly getting older—which is exacerbated by relatively high levels of emigration. Greece has seen hundreds of thousands of its most ambitious young people go to live abroad since the start of the financial crisis in 2008. Young people move. Old people stay put.

Who is going to do the work that drives the economy and supports the elderly? More immigrants is the obvious answer. But the cause of the problem is also what stands in the way of a solution: aging populations are where resistance to immigration is often fiercest. The young are generally more comfortable with multicultural communities, but an elderly majority has the growing power to make its attitudes the ones that count. This could be a vicious cycle: keeping migrants out reinforces the generational divisions in democratic politics.

The U.S. is not there yet. While a Pew study in June found that 38% of Americans ages 65 and older were unsympathetic toward even immigrants in the country legally, America still is more youthful than Western Europe, in part because it has been much more open to immigration in the past. Pulling up the drawbridge would risk a similar predicament.

Western Europe is not the only example of how this trend might play out. Japan, one of the oldest societies on earth, is also one of the most resistant to immigration. The Japanese appear far more comfortable with allowing

In major

societies

the elderly

dominate the

youth simply

by weight of

robots rather than foreigners to do the work that a missing generation of young people would do. But it is not clear that the pace of technological change will keep up with growing demands. Nor is it obvious what will drive economic growth without a new generation of consumers to fuel it.

Another bet is that attitudes to immigration will change as

younger generations age. But waiting for young people to grow old, and anticipating that they stay young at heart, is a long-term strategy with little to underpin it except hope.

The images of cages and crying children and impassive men in uniforms are enough to elicit a fear of returning to the 1930s. But although the words of anti-immigrant politicians—especially leaders like Orban, Salvini and Trump—are occasionally as bad as anything we have heard in the past, the underlying social situation is very different.

Back then, democracies collapsed because they could not accommodate the impatience of the young, who had been through the turmoil of war and economic depression. Now they are at risk from the intransigence of the old, who have known little except prosperity and peace. This anger will not produce a sudden collapse, because old people are very unlikely to resort to violence against the state. But it may mean a slow decline.

Runciman heads the politics department at the University of Cambridge and is the author, most recently, of How Democracy Ends

#### SHORT READS

Highlights from stories on time.com/ideas

#### Resigning from Homeland Security

Ex-Congresswoman
Elizabeth Holtzman
explains why she
stepped down from the
department's Advisory
Council: "That the U.S.
is frightened today
by the presence of an
additional 2,000 or so
children and parents
from Central America
is laughable and
appalling."

#### Lost lessons from tragedy

For her novel The Daisy Children, Sofia Grant studied the deadliest school disaster in U.S. history—a 1937 explosion in Texasand found that back then, bystanders more frequently had to become first responders. She suggests that visceral connection may have had benefits: "It's hard to look at the victims and survivors closelybut to remember them better, we must."

#### What changed after Lewinsky

Author Jill Filipovic read Monica Lewinsky's 1998 grand-jury testimony and saw how our vocabulary for sex and power has grown: "[We] understand

"[We] understand where our motivations are less about unvarnished romance and more about awe or admiration."

#### By Ian Bremmer

THE RISK REPORT

THERE'S NO MYSTERY as to why U.S. policymakers and politicians use sanctions. Targeted intelligently and implemented effectively, they can

**Sanctions** 

can't force

countries

to renounce

core

interests...

Iran may

think it easier

to simply

wait out

the Trump

presidency

compel other countries to do things they wouldn't do without war. They can push governments of smaller countries like Iran and North Korea to negotiate and separate terrorists from sources of funding. They can raise the cost of undesirable actions to larger countries like Russia, even when

they can't quickly change behavior. They can help politicians seem tough while relieving pressure for high-risk, high-cost strategies.

Sanctions on Iran helped President Obama and European leaders push Iran's leaders toward a nuclear deal. Now that President Trump has withdrawn from that deal, he can use U.S. leverage to ratchet up another round of pressure. The reimposition of some sanctions on Aug. 7, and the credible threat that

all-important oil sanctions will follow in November, will generate high anxiety in Tehran. Iran's currency has plummeted this year, and there have been sizable protests against the regime as inflation rises. Its economy is set to contract sharply next year.

Yet there are many reasons that sanctions are far from an ideal tool. The U.S. remains an economic superpower, but there are now many more countries with the strength, resilience and confidence to shrug off U.S. pressure. While European companies may reluctantly agree to comply with U.S. demands to stop doing business in Iran, China and Russia likely won't.

Sanctions on a country like Russia are of limited use, because they leave the Russian public, and the officials and oligarchs targeted by penalties, even more dependent on support from the state.

That bolsters rather than undermines Vladimir Putin's authority. Sanctioned governments are able to deflect criticism of economic mismanagement by blaming the U.S. for their woes.

In addition, sanctions can't force countries to renounce what they consider core interests. The sanctions placed on Russia after the annexation of Crimea might limit its aggression against other countries, but they won't push Russia out of Ukraine completely—not when it is so central to Putin's vision of his legacy. Nor are sanctions against Iran likely to force

its government to withdraw support for groups like Hamas and Hizballah. Iran may well think it easier to simply wait out the Trump presidency.

Sanctions can also backfire when they provoke retaliation that harms domestic interests. The more the U.S. uses its market power to apply pressure, the more countries will think twice about doing business with U.S. companies. And if policymakers weaponize the dollar too often, it could incentivize target countries—

and those who fear being targeted in the future—to flock to other currencies for their reserves.

Finally, trade and financial wars, like regular wars, are usually won with the help of allies. Trump has embarked on trade conflicts with China, Europe, Canada and Mexico even as the U.S. targets Russia, North Korea, Venezuela and Iran with sanctions. On Aug. 1, Trump launched sanctions against Turkey over the detention of an American pastor, just days after Germany dropped its sanctions. Fighting everyone at once can be counterproductive, because sanctions require cooperation and coordination.

"I am asking for WORLD PEACE, nothing less!" tweeted Trump as he announced his latest move against Iran. Sanctions will certainly put pressure on Iran's government, but universal harmony is probably not a realistic goal.

POLITICS

#### The fate of the death penalty

Pope Francis' change to the Catholic Church's position on the death penalty on Aug. 2, deeming it completely "inadmissible" and violative of a person's "dignity," follows the sharp decline of capital punishment worldwide. Just five countries—China, Iraq, Iran, Saudi Arabia and Pakistan—carried out more than 90% of last year's executions.

But the Vatican's message may be least influential in the 60 or so countries that retain it. Many are authoritarian, and others reject the Pope's human-rights frame as a Western project inimical to indigenous cultural or religious commitments.

In the U.S., the only Western democracy that still exacts the death penalty, the Supreme Court's test for when a punishment becomes "cruel and unusual" is whether it violates "evolving standards of decency." The Pope's new position may well bear significantly on the court's assessment of those standards.

-Carol S. Steiker and Jordan M. Steiker, authors of Courting Death: The Supreme Court and Capital Punishment



#### Society

\*Heritage, not hate. The South will rise again! **Stay woke and natural!** Let's stand united to defend our faith iends. Protect the 2nd. Without it, you won't have any others! #dope #beautiful #wakeup #wewillsurvive #org the business world is how to retain top millennial talent. **Indigenous people unite!** Jesus always stood for peace a ways tried to destroy things they don't understand. And white people never understood native culture **allon is very popular, but people aren't sure about his sincerity...** What Makes Dreaming So Much More Vivi ike 60, 24, 7 And 52 But Once We Get To Years We Go Into Base Ten (Decades, Centuries, etc.)? Check the l **cop laughing if you watch this <mark>video. #FatherDaughterTal</mark>k J**ustice must be served! By any means necessary! I ties. **This picture is worth a thousand words** in ou e need this unity in our communiwouldn't be in existence. **We are intelligent and wis IRAL!** Without our women, all of <mark>us</mark> ake us proud! This is wh<mark>at</mark> should be reported by media more often to prov our mom knows what to do **This s<mark>ystem doesn't app-eciate</mark> our sacrifices. When will we have real justice i**i veryone likes gossips **This costume is dreamy...** What is your type and why? **We both fight the same system a** ake it go viral! Like and share! We should be fearless in our fight for our freedom. We should not back dow umans until race disconnected us, religion separated us. politics divided us, and wealth classified us. **Join the even rowd that set the European standards of beauty.** If you want to stress that you use something you taken from a nything about its meaning, it can look strange, even weird. "The possible has been tried and failed. Now it's ou agree! Our creativity comes from the ancestors **The most important thing in the world is to be yourself no** ome of y'all wouldn't understand... **Smh** Our ancient blood makes us awesome! **"Diversity on the bench is so im**] rounds, different religious backgrounds." Be proud of who you are! People try to sabotage this truth, by sa nemy. Ignorance is the enemy." Support our Veterans! Veterans Come First ATTENTION! COMMUNITY CALL! his hairdresser from Atlanta is amazing. All it takes is to believe. Don't believe stereotypes. Don't believe t es. To most of us, the given explanations sound messy and weak: these officers are frightened because ach other and never give up. **Gorgeous: Strength is your pow<mark>er!</mark> They might party hard and sta**y up late, but the ou know? **We applaud this woman's dignity and ability co<mark>pe</mark>** <mark>w</mark>ith ignorance a ou ready to protect your community? Heritage, not hate. The Sou<mark>th</mark> will rise again! **Stay** Without it, you wo e**lf to protect your loved ones and friends.** Protect the 2n<mark>d.</mark> nange and leading digital advancement. The big question in the <mark>business world is how to retain t</mark>op millennial tale ards Him and His disciples. **People have always tried to destroy things they don't understand. And white pe** it the link **Tonight Show with Jimmy Fallon is very popular, but people aren't sure about his sincerity...** Wl ays, And Weeks In Weird Terms Like 60, 24, 7 And 52 But Once We Get To Years We Go Into Base Ten (De elp you run your business. **You won't stop laughing if you watch this video. #FatherDaughterTalk** Justice mu ring tears to your eyes. Make it go viral. We need this unity in our communities. **This picture is worth a thousand** AKE HER VIRAL! Without our women, all of us wouldn't be in existence. We are intelligent and wiser than the iral traditions. **You make us proud! This is what should be reported by media more often to prove the w** ryone needs family. Your mom knows what to do This system doesn't appreciate our sacrifices. When will eparate but to build bridges and unite! **Amen for Mexico!** Everyone likes gossips **This costume is dreamy...** What o be pretty a girl doesn't need to show her body. Let's make it go viral! Like and share! We should be fearless e determined by how well we fight today. We were all humans until race disconnected us, religion separated us ate regardless! Supermodel decided not to go with the crowd that set the European standards of beauty. iing you taken from another culture it's one thing. But when you wear (for example) dreadlocks and don't know any g, it can look strange, even weird. "The possible has been tried and failed. Now it's time to try the imposs

All text is excerpted from social-media advertisements promoted on Facebook by the Russian Internet Research Agency. The source material is publicly available on the Democrats' House Intelligence Committee website.

agree! Our creativity comes from the ancestors **The most in** we don't play no games, we don't waste no time Some of y the bench is so important because the people that come

as an army of Jesus! **Sometime<mark>s</mark>** you have to arm yourself to protect your loved ones an social change and leading digital advancement. The big questic **anize** Black Millenials are drivi<mark>n</mark>g ten issued threats towards Him and His disciples. **People hav** and non-violence. But enemies <mark>o</mark> properly. Do you want to see top 5 girls who applied for a job at Facebook? Hit the link Tonight Show with Jimm id And Memorable Than Just Thinking? **Why Do We Count Seconds, Hours, Days, And Weeks In Weird Tern** ink below to know the answer! Pay attention to these useful apps that will help you run your business. You won **Make sure you guide your children and motivate them.** This video may bring tears to your eyes. Make it go vira r fight to save Southern Heritage! God bless Dixie! **She's really an example to everyone. GUYS, LETS MAKE HE** er than they are. Im proud of y'all. We should more often expose our children to positive cultural traditions. Yo ve the world that Black Girls Rock! Being born and raised in Chicago is not easy at all. Everyone needs famil **n this country?** We came here not to build borders and separate but to build bridges and unite! **Amen for Mexic nd we both will win in the future.** Heritage not hate. **To be pretty a girl doesn't need to show her body.** Let **n and give up for the future of these little ones will be determined by how well we fight today.** We were a t, bring your friends, feel safe with us! Haters gonna hate regardless! Supermodel decided not to go with the another culture it's one thing. But when you wear (for e<mark>x-</mark> ample) dreadlocks and don't kno self-identification is our way! **Like time to try the impossible."** Self-empowerment a<mark>nd</mark> games, we don't waste no tim matter what And God was so right! we don't play no portant because the people that come to court co<mark>me from all different walk</mark>s of life, different ethnic back ying it's a lie Staying Woke, building-up our communities, uplifting our people. Join us! "No particular race is th **S FOR A BOYCOTT!** Join the event, bring your friends, feel safe with us! Don't miss the opportunity to train outdoor the media. Ifs not flesh and blood. But the heart which makes us fathers and sons. Please, understand our stru e they have done something wrong and we all know what. You see, our people succeed in everything. Suppo y graduate **The circle of life. The beginning and the ending.** Like and share **This is so true and amazing!** D nd indifference of the people. Couldn't have said it better. Raise your children with respect to our roots! A woke and natural! Let's stand united to defend our faith as an army of Jesus! Sometimes you have to arm you n't have any others! **#dope #beautiful #wakeup #wewillsurvive #organize** Black Millenials are driving soci nt. **Indigenous people unite!** Jesus always stood for peace and non-violence. But enemies often issued threats t **eople never understood native culture properly.** Do you want to see top 5 girls who applied for a job at Faceboo nat Makes Dreaming So Much More Vivid And Memorable Than Just Thinking? **Why Do We Count Seconds, Hour** cades, Centuries, etc.)? Check the link below to know the answer! Pay attention to these useful apps that w ast be served! By any means necessary! **Make sure you guide your children and motivate them.** This video ma words in our fight to save Southern Heritage! God bless Dixie! She's really an example to everyone. GUYS, LET **y are. Im proud of y'all.** We shou<mark>ld</mark> more often expose our children to positive cu orld that Black Girls Rock! Being born and raised in Chicago is not easy at all. **E** we have real justice in this cou<mark>n-</mark> try? We came here not to build borders ar at is your type and why? **We both fight the same system and we bo**th **will win in the future.** Heritage not hat in our fight for our freedom. We should not back down and give up for the future of these little ones wi . politics divided us, and wealth classified us. Join the event, bring your friends, feel safe with us! Haters gonr If you want to stress that you use som **BOTS AND PROPAGANDISTS ARE JUST PART OF THE PROBLEM** thing about THE BIGGER ISSUE IS YOUR BRAIN sible." Self-empowerment and self-identification is our way! portant thing in the world is to be yourself no matter what And God was so righ all wouldn't understand... Smh Our ancient blood makes us awesome! "Diversity of

e to court come from all different walks of life, different ethnic backgrounds, different religious bac

# Sitting in front of a computer not long ago, a tenured history professor faced a challenge that billions of us do every day: deciding whether to believe something on the Internet.

On his screen was an article published by a group called the American College of Pediatricians that discussed how to handle bullying in schools. Among the advice it offered: schools shouldn't highlight particular groups targeted by bullying because doing so might call attention to "temporarily confused adolescents."

Scanning the site, the professor took note of the ".org" web address and a list of academic-looking citations. The site's sober design, devoid of flashy, autoplaying videos, lent it credibility, he thought. After five minutes, he had found little reason to doubt the article. "I'm clearly looking at an official site," he said.

What the professor never realized as he focused on the page's superficial features is that the group in question is a socially conservative splinter faction that broke in 2002 from the mainstream American Academy of Pediatrics over the issue of adoption by same-sex couples. It has been accused of promoting antigay policies, and the Southern Poverty Law Center designates it as a hate group.

Trust was the issue at hand. The bookish professor had been asked to assess the article as part of an experiment run by Stanford University psychologist Sam Wineburg. His team, known as the Stanford History Education Group, has given scores of subjects such tasks in hopes of answering two of the most vexing questions of the Internet age: Why are even the smartest among us so bad at making judgments about what to trust on

the web? And how can we get better?

Wineburg's team has found that Americans of all ages, from digitally savvy tweens to high-IQ academics, fail to ask important questions about content they encounter on a browser, adding to research on our online gullibility. Other studies have shown that people retweet links without clicking on them and rely too much on search engines. A 2016 Pew poll found that nearly a quarter of Americans said they had shared a made-up news story. In his experiments, MIT cognitive scientist David Rand has found that, on average, people are inclined to believe false news at least 20% of the time. "We are all driving cars, but none of us have licenses," Wineburg says of consuming information online.

Our inability to parse truth from fiction on the Internet is, of course, more than an academic matter. The scourge of "fake news" and its many cousinsfrom clickbait to "deep fakes" (realisticlooking videos showing events that never happened)—have experts fearful for the future of democracy. Politicians and technologists have warned that meddlers are trying to manipulate elections around the globe by spreading disinformation. That's what Russian agents did in 2016, according to U.S. intelligence agencies. And on July 31, Facebook revealed that it had found evidence of a political-influence campaign on the platform ahead of the 2018 midterm elections. The authors of one now defunct page got thousands of people to express interest in attending a made-up protest that apparently aimed to put white nationalists and left-wingers on the same streets.

But the stakes are even bigger than elections. Our ability to vet information matters every time a mother asks Google whether her child should be vaccinated and every time a kid encounters a Holocaust denial on Twitter. In India, false rumors about child kidnappings that spread on WhatsApp have prompted mobs to beat innocent people to death. "It's the equivalent of a public-health crisis," says Alan Miller, founder of the nonpartisan News Literacy Project.

There is no quick fix, though tech companies are under increasing pressure to come up with solutions. Facebook lost more than \$120 billion in stock value in a single day in July as the company dealt with a range of issues limiting its growth, including criticism about how conspiracy theories spread on the platform. But engineers can't teach machines to decide what is true or false in a world where humans often don't agree.

In a country founded on free speech, debates over who adjudicates truth and lies online are contentious. Many welcomed the decision by major tech companies in early August to remove content from florid conspiracy theorist Alex Jones, who has alleged that passenger-jet contrails are damaging people's brains and spread claims that families of Sandy Hook massacre victims are actors in an elaborate hoax. But others cried censorship. And even if law enforcement and intelligence agencies could ferret out every bad actor with a keyboard, it seems unwise to put the government in charge of scrubbing the Internet of misleading statements.

What is clear, however, is that there is another responsible party. The problem is not just malicious bots or chaos-loving trolls or Macedonian teenagers pushing phony stories for profit. The problem is also us, the susceptible readers. And experts like Wineburg believe that the better we understand the way we think in the digital world, the better chance we have to be part of the solution.



we don't fall for false news just because we're dumb. Often it's a matter of letting the wrong impulses take over. In an era when the average American spends 24 hours each week online—when we're always juggling inboxes and feeds and alerts—it's easy to feel like we don't have time to read anything but headlines. We are social animals, and the desire for likes can supersede a latent feeling that a story seems dicey. Political convictions lead us to lazy thinking. But there's an even more fundamental impulse at play: our innate desire for an easy answer.

Humans like to think of themselves as rational creatures, but much of the time we are guided by emotional and irrational thinking. Psychologists have shown this through the study of cognitive shortcuts known as heuristics. It's hard to imagine getting through so much as a trip to the grocery store without these helpful time-savers. "You don't and can't take the time and energy to examine and compare every brand of yogurt,"

Fact-checkers in Mexico City work to counter false claims spreading online ahead of the country's July 1 presidential election

says Wray Herbert, author of *On Second Thought: Outsmarting Your Mind's Hard-Wired Habits*. So we might instead rely on what is known as the familiarity heuristic, our tendency to assume that if something is familiar, it must be good and safe.

These habits of mind surely helped our ancestors survive. The problem is that relying on them too much can also lead people astray, particularly in an online environment. In one of his experiments, MIT's Rand illustrated the dark side of the fluency heuristic, our tendency to believe things we've been exposed to in the past. The study presented subjects with headlines—some false, some true—in a format identical to what users see on Facebook. Rand found that simply being exposed to fake news (like an article that claimed President Trump was going to

brink back the draft) made people more likely to rate those stories as accurate later on in the experiment. If you've seen something before, "your brain subconsciously uses that as an indication that it's true," Rand says.

This is a tendency that propagandists have been aware of forever. The difference is that it has never been easier to get eyeballs on the message, nor to get enemies of the message to help spread it. The researchers who conducted the Pew poll noted that one reason people knowingly share made-up news is to "call out" the stories as fake. That might make a post popular among like-minded peers on social media, but it can also help false claims sink into the collective consciousness.

Academics are only beginning to grasp all the ways our brains are shaped by the Internet, a key reason that stopping the spread of misinformation is so tricky. One attempt by Facebook shows how introducing new signals into this busy domain can backfire. With hopes of curtailing

#### Society

junk news, the company started attaching warnings to posts that contained claims that fact-checkers had rated as false. But a study found that this can make users more likely to believe any unflagged post. Tessa Lyons-Laing, a product manager who works on Facebook's News Feed, says the company toyed with the idea of alerting users to hoaxes that were traveling around the web each day before realizing that an "immunization approach" might be counterproductive. "We're really trying to understand the problem and to be thoughtful about the research and therefore, in some cases, to move slower," she says.

Part of the issue is that people are still relying on outdated shortcuts, the kind we were taught to use in a library. Take the professor in Wineburg's study. A list of citations means one thing when it appears in a book that has been vetted by a publisher, a fact-checker and a librarian. It means quite another on the Internet, where everyone has access to a personal printing press. Newspapers used to physically separate hard news and commentary, so our minds could easily grasp what was what. But today twothirds of Americans get news from social media, where posts from publishers get the same packaging as birthday greetings and rants. Content that warrants an emotional response is mixed with things that require deeper consideration. "It all looks identical," says Harvard researcher Claire Wardle, "so our brain has to work harder to make sense of those different types of information."

Instead of working harder, we often try to outsource the job. Studies have shown that people assume that the higher something appears in Google search results, the more reliable it is. But Google's algorithms are surfacing content based on keywords, not truth. If you ask about using apricot seeds to cure cancer, the tool will dutifully find pages asserting that they work. "A search engine is a search engine," says Richard Gingras, vice president of news at Google. "I don't think anyone really wants Google to be the arbiter of what is or is not acceptable expression."

That's just one example of how we need to retrain our brains. We're also inclined to trust visuals, says Wardle. But some photos are doctored, and other legitimate ones are put in false contexts.

On Twitter, people use the size of others' followings as a proxy for reliability, yet millions of followers have been paid for (and an estimated 10% of "users" may be bots). In his studies, Wineburg found that people of all ages were inclined to evaluate sources based on features like the site's URL and graphic design, things that are easy to manipulate.

It makes sense that humans would glom on to just about anything when they're so worn out by the news. But when we resist snap judgments, we are harder to fool. "You just have to stop and think," Rand says of the experiments he has run on the subject. "All of the data we have collected suggests that's the real problem. It's not that people are being super-biased and using their reasoning ability to trick themselves into believing crazy stuff. It's just that people aren't stopping. They're rolling on."

THAT IS, OF COURSE, the way social-media platforms have been designed. The endless feeds and intermittent rewards are engineered to keep you reading. And there are other environmental factors at play, like people's ability to easily seek out information that confirms their beliefs. But Rand is not the only academic who believes that we can take a big bite out of errors if we slow down.

Wineburg, an 18-year veteran of Stanford, works out of a small office in the center of the palm-lined campus. His group's specialty is developing curricula that teachers across the nation use to train kids in critical thinking. Now they're trying to update those lessons for life in a digital age. With the help of funding from Google, which has devoted \$3 million to the digital-literacy project they are part of, the researchers hope to deploy new rules of the road by next year, outlining techniques that anyone can use to draw better conclusions on the web.

His group doesn't just come up with smart ideas; it tests them. But as they set out to develop these lessons, they struggled to find research about best practices. "Where are the studies about what superstars do, so that we might learn from them?" Wineburg recalls thinking, sitting in the team's office beneath a print of the Tabula Rogeriana, a medieval map that pictures the world in a way we now see as upside-down. Eventually,

#### DANGEROUS MINDS

Academics are still trying to understand all the ways we are vulnerable to misinformation on the Internet. Readers report being overwhelmed by the sheer volume of content they encounter online on a daily basis. Here are some of the reasons we're susceptible to believing dubious claims—and why we play a role in spreading them.

#### **INDECENT EXPOSURE**

MIT cognitive scientist David
Rand has shown that simply being
exposed to fake news makes
people more likely to believe the
claims. This "illusory truth" effect
works even when such claims run
counter to the reader's political
ideology. This may be because we
subconsciously rely on cognitive
shortcuts, known as heuristics, to
make quick decisions about what
to trust online. These habits of the
mind can lead people to assume,
for example, that if something is
familiar, it is also safe.

#### **SOCIAL CREATURES**

In a 2016 Pew poll, 23% of Americans said they had shared a made-up news story. While many did so unknowingly, 14% said they were aware it was false at the time. Experts suggest that our deep desire for social feedback, which may come in the form of retweets or likes on social media, can trump any hesitation we might have about sharing inaccurate information.

#### THE LATEST SENSATION

Another study conducted at MIT found that claims that fact-checkers rated as false traveled faster and further on Twitter than claims they rated as true. The authors also determined that false claims were more likely to elicit feelings of surprise and disgust. In India, where viral rumors about kidnappings have spread on WhatsApp and led mobs to kill strangers, the tech company took out ads asking people to "question information that upsets you."

a cold email to an office in New York revealed a promising model: professional fact-checkers.

Fact-checkers, they found, didn't fall prey to the same missteps as other groups. When presented with the American College of Pediatricians task, for example, they almost immediately left the site and started opening new tabs to see what the wider web had to say about the organization. Wineburg has dubbed this lateral reading: if a person never leaves a site—as the professor failed to do—they are essentially wearing blinders. Fact-checkers not only zipped to additional sources, but also laid their references side by side, to better keep their bearings.

In another test, the researchers asked subjects to assess the website MinimumWage.com. In a few minutes' time, 100% of fact-checkers figured out that the site is backed by a PR firm that also represents the restaurant industry, a sector that generally opposes raising hourly pay. Only 60% of historians and 40% of Stanford students made the same discovery, often requiring a second prompt to find out who was behind the site.

Another tactic fact-checkers used that others didn't is what Wineburg calls "click restraint." They would scan a whole page of search results—maybe even two—before choosing a path forward. "It's the ability to stand back and get a sense of the overall territory in which you've landed," he says, "rather than promiscuously clicking on the first thing." This is important, because people or organizations with an agenda can game search results by packing their sites with keywords, so that those sites rise to the top and more objective assessments get buried.

The lessons they've developed include such techniques and teach kids to always start with the same question: Who is behind the information? Although it is still experimenting, a pilot that Wineburg's team conducted at a college in California this past spring showed that such tiny behavioral changes can yield significant results. Another technique he champions is simpler still: just read it.

One study found that 6 in 10 links get retweeted without users' reading anything besides someone else's summation of it. Another found that false sto-

# 'It's the equivalent of a publichealth crisis.'

**ALAN MILLER,** founder of the nonpartisan News Literacy Project, on the amount of misinformation that is spreading online

ries travel six times as fast as true ones on Twitter, apparently because lies do a better job of stimulating feelings of surprise and disgust. But taking a beat can help us avoid knee-jerk reactions, so that we don't blindly add garbage to the vast flotillas already clogging up the web. "What makes the false or hyperpartisan claims do really well is they're a bit outlandish," Rand says. "That same thing that makes them successful in spreading online is the same thing that, on reflection, would make you realize it wasn't true."

TECH COMPANIES have a big role to play in stemming the tide of misinformation, and they're working on it. But they have also realized that what Harvard's Wardle calls our "information disorder" cannot be solved by engineers alone. Algorithms are good at things like identifying fake accounts, and platforms are flagging millions of them every week. Yet machines could only take Facebook so far in identifying the most recent influence campaign.

One inauthentic page, titled "Resisters," ginned up a counterprotest to a "white civil rights" rally planned for August in Washington, D.C., and got legitimate organizations to help promote it. More than 2,600 people expressed interest in going before Facebook revealed that the page was part of a coordinated operation, disabled the event and alerted users. The company has hired thousands of content reviewers that have the sophistication to weed through tricky mixes of truth and lies. But Facebook can't employ enough humans to manually review the billions of posts that are put up each day, across myriad countries and languages.

Many misleading posts don't violate tech companies' terms of service. Facebook, one of the firms that removed content from Jones, said the decision did not relate to "false news" but prohibitions against rhetoric such as "dehumanizing language." Apple and Spotify cited rules against hate speech, which is generally protected by the First Amendment. "With free expression, you get the good and the bad, and you have to accept both," says Google's Gingras. "And hopefully you have a society that can distinguish between the two."

You also need a society that cares about that distinction. Schools make sense as an answer, but it will take money and political will to get new curricula into classrooms. Teachers must master new material and train students to be skeptical without making them cynical. "Once you start getting kids to question information," says Stanford's Sarah McGrew, "they can fall into this attitude where nothing is reliable anymore." Advocates want to teach kids other defensive skills, like how to reversesearch an image (to make sure a photo is really portraying what someone says it is) and how to type a neutral query into the search bar. But even if the perfect lessons are dispersed for free online, anyone who has already graduated will need to opt in. They will have to take initiative and also be willing to question their prejudices, to second-guess information they might like to believe. And relying on openmindedness to defeat tribal tendencies has not proved a winning formula in past searches for truth.

That is why many advocates are suggesting that we reach for another powerful tool: shame. Wardle says we need to make sharing misinformation as shameful as drunk driving. Wineburg invokes the environmental movement, saying we need to cultivate an awareness of "digital pollution" on the Internet. "We have to get people to think that they are littering," Wineburg says, "by forwarding stuff that isn't true." The idea is to make people see the aggregate effect of little actions, that one by one, ill-advised clicks contribute to the web's being a toxic place. Having a well-informed citizenry may be, in the big picture, as important to survival as having clean air and water. "If we can't come together as a society around this issue," Wineburg says, "it is our doom."





# THE WEATHER OUTLOOK FOR THE LOW COUNTRY OF SOUTH CAROLINA LOOKED UNSETTLING.

Alan Walters, charged with protecting more than 9,000 students as the executive director of safety for the Georgetown County school district there, pored over the forecasts. Just a few weeks into the 2015 school year, he was facing the possibility of a dangerous storm. With computer forecast models literally all over the map in projecting where the storm—soon to become Hurricane Joaquin-would go, Walters was left to weigh the options on his own. The choice, as ever, was between sounding the alarm and sounding unduly alarmed. Closing schools early meant safe kids and freed-up school buildings and buses for evacuation use. But it also could cause unnecessary distress, and deprive low-income students of the breakfast and lunch they would have had at school if the storm didn't hit. By Thursday, Oct. 1, with heavy rains imminent but no clear picture of whether Joaquin would hit the coast, Walters and the superintendent made a call: no school on Friday.

Joaquin veered away but fed massive amounts of moisture to another system hovering over the Southeast. The unusual configuration dumped a staggering amount of rain—more than 20 inches—sending Georgetown County's five rivers surging over their banks, making roads impassable and isolating communities. Schools remained closed for seven days. "We had to send teachers in by boat, and we commandeered a church for classes," Walters says. Ultimately, the flooding was blamed for 19 fatalities and nearly \$1.5 billion in damages in South Carolina.

So Walters and other officials made the right call, but with little time to spare. The uncertain forecasts had them scrambling, and Walters knows well the risks of crying wolf with an unnecessary alert. Before joining the school district, he was a law-enforcement officer for 17 years and often had to go door-to-door to persuade skeptical residents to evacuate. "We'd hand them a black Sharpie and tell them to write your name and next of kin" on their arm, he says. To keep people safe, he needs a forecast that's both accurate and early. "We don't want to be running down to the wire," he says. "If we can get notice further out, and better probabilities, we can do a lot more preparation. That would be huge."

In the scientific race to predict dangerous storms, many experts believe the U.S. has fallen behind. In 2012, Europe's weather center correctly foresaw that Superstorm Sandy would smash into the East Coast even as the U.S. computer model was projecting no landfall. Since then, the relative accuracy of "the Euro model" has only gotten more publicity, putting American weather prowess under scrutiny. The stakes are enormous: from saving lives in severe storms and guiding farmers and manufacturers on key decisions to supporting emerging industries like self-driving cars and delivery drones, meteorology plays a critical, often underappreciated role in public safety and economic growth. National Weather Service (NWS) figures put the number of U.S. weather-related deaths last year at 508, a number that doesn't include unofficial estimates of Hurricane Maria—related deaths in Puerto Rico that range from hundreds to more than 1,000. The cost to the U.S. economy from weather and climate in 2017 (including everything from damage to homes to crops wiped out) was estimated at \$306 billion by the National Oceanic and Atmospheric Administration (NOAA).

For Walters—and everyone threatened by severe weather—a more accurate forecast means stopping the hemorrhage of lives and money caused by increasingly frequent storms. And up the East Coast in New Jersey, a short drive from the shoreline devastated by Sandy, an unlikely oracle by the name of Shian-Jiann Lin has invented a better way to predict the future.

Lin is a scientist, not a psychic. His crystal ball is a supercomputer and a set of mathematical equations; his rituals involve dividing the sky into imaginary boxes and the prognostications he pursues can help millions avoid, or at least prepare for, disaster. The next-generation weather forecast model that Lin and his team at the Geophysical Fluid Dynamics Laboratory in Princeton have devised, called FV3, is about to become a linchpin for U.S. meteorologists.

Louis Uccellini, director of the NWS, describes FV3 as "a major breakthrough" and tells TIME that progress is now ahead of schedule, with the revamped model set to exit testing and become operational in early 2019. The goal: put the U.S. global forecast model back on top in a world being reshaped by climate change. In this summer of extreme events, from brutal heat waves to deadly forest fires, everyone wants to know what the weather will do next.

LIN, 60, works from a corner office at the NOAA's Geophysical Fluid Dynamics Laboratory that looks like an obsessed academic's lair: a desktop computer screen and a laptop, surrounded by whiteboards covered in equations and a scattering of books.

The appearances belie the immense complexity of Lin's work. The screen on his desktop is connected to a U.S. Government facility in Oak Ridge, Tenn., where a supercomputer named Gaea, after the Earth goddess of Greek mythology, can perform more than 1.1 quadrillion



calculations a second. I watch as Lin types a simple one-line command: "msub C\_1536\_0801\_e76." Those keystrokes transmit a set of initial parameters to Oak Ridge and instruct Gaea to launch the experimental FV3 model. It will take about 80 minutes to complete the full 10-day run of the model. In other words, every eight minutes it looks one day further into the future.

When Lin shows me some results, I learn a bit of bad news about the Fourth of July holiday that's a week away. "This is hot," Lin says, scanning the map. "This is pretty hot." Indeed, his model has things sweltering in large swaths of the country,

Weather scientist Shian-Jiann Lin created a new prediction model that could catch the U.S. up to the Europeans

\$306
BILLION
THE COST OF WEATHER DAMAGE
TO THE U.S. ECONOMY IN 2017

a heat wave that did indeed come to pass.

To understand FV3, you first need to know how weather-forecasting models work. First, a computer creates a mathematical picture of the current state of the atmosphere based on real-world observations of air pressure, temperature and moisture from the multibillion-dollar global infrastructure of satellites, radar, weather stations and sounding balloons.

Next, using equations that describe the movement of air, the computer crunches numbers to step forward in time—calculating what the atmosphere will look like a few minutes in the future. Keep feeding those numbers back into the equations, and you can predict further out in time. It's all governed by the laws of physics, much the same way a video game can simulate the arc of a basketball thrown across an imaginary court.

What Lin and his team have done is devise a better, more accurate way for the computer to organize that picture of the atmosphere and how it behaves—the so-called dynamical core of the model. While the current American model uses a "spectral model," where the atmosphere is represented by mathematical waves, FV3 ("Finite Volume on a Cubed-Sphere") divides the atmosphere into boxes. Each box of air might be a little different in temperature, humidity, pressure and movement. Each box also acts upon the other boxes touching it, and vice versa. This models the atmosphere more accurately.

Lin is proud of this work and believes that FV3 will significantly up the U.S. meteorology game. "One of our main goals is helping NOAA and the nation have the best forecast humanly possible," he says. "But it's certainly a competition around the world."

AMERICA'S LAGGING prediction model is especially dangerous when you consider that disaster preparedness is as much a psychological exercise as a technological one. The general public now has more access to weather-forecast information than ever before. From weather geeks glued to their smartphone apps to ordinary citizens tuning in to nonstop cable-TV coverage, there's surprising awareness of discrepancies between the U.S. and European models—and experts worry this is leading some amateurs to choose

#### Science

the predictions they like best and disregard official advice on evacuations and precautions.

Like Walters, emergency-management expert Craig Fugate has struggled to make sure the public takes warnings seriously. Fugate, now the chief emergency management officer of One Concern, an artificial-intelligence startup focused on disaster preparation and management, spent nearly eight years running the Federal Emergency Management Agency (FEMA), beginning in 2009, and is perhaps best known for coining the "Waffle House Index" to diagnose the severity of a disaster. (If Waffle House—a chain restaurant known for staying open even in difficult conditions—is closed, things are really bad.) A onetime paramedic, Fugate served in a number of county and state emergency-management roles before FEMA, including director of the Florida Division of Emergency Management under Jeb Bush.

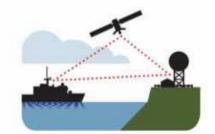
Fugate still recalls vividly the destruction from Hurricane Charley in 2004. "We're looking at this little speck of a storm that's so rapidly changing," he says. It wound up rapidly intensifying, surprising forecasters by surging to Category 4 just before landfall in Florida. He remembers flying in a helicopter over the devastated areas just afterward to survey the damage. "You could see right where it went over Orlando," he says. There were 10 direct fatalities and an estimated \$15 billion in damage costs in the U.S.

Better forecast accuracy and a longer lead time would have been vital during Charley. "The more confidence we have, the more we can get people to do things early," Fugate says. "You're willing to make the decisions days out where you can affect the outcome." When computer models generate conflicting or low-confidence predictions, forecasters generally must err on the side of safety that is, they overwarn rather than underwarn. Overpreparation-moving supplies, mobilizing workers for overtime—is costly and carries its own variety of danger. "If you cry wolf and nothing happens, that's a dilemma," Fugate says. Fuel public distrust of forecasts, and more lives could be lost.

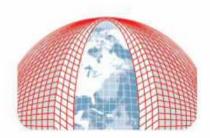
The constant comparisons with the European model obscure the fact that U.S. weather forecasting is remarkably

#### HOW TO PREDICT A STORM

Even small improvements in forecasting can have a big impact on saving lives and property. Here's how most weather models read the future:

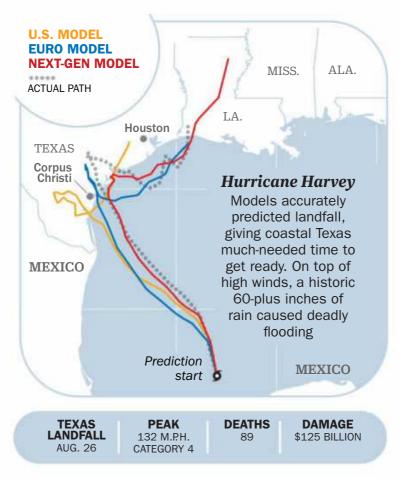


Collect data
Instruments on Earth
and in space constantly
measure temperature,
pressure, cloud cover and
other weather metrics



2 Sort conditions
The global data is synced every six hours. In the next-gen model, it gets divided into a grid of more than 200 million cubes

#### TRACK RECORDS During testing on last year's worst storms, the next-generation FV3





good—and getting better all the time. In fact, our ability to forecast the weather at this level of accuracy could easily rank as one of the great scientific achievements of the past century.

Take the daily NWS forecasts for high and low temperatures, for instance. One-day forecasts—the temperatures expected tomorrow—from the past few years are off by only 2°F to 3°F. In 2017 a five-day forecast had the same level of accuracy as a three-day forecast from 15 years ago. Our ability to look further into the future is consistently expanding.

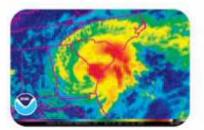
Even statistics like those don't reflect the real-world impact from forecast improvements. When some 4,000 of the nation's meteorologists and weather

professionals gathered at an annual meeting in Austin earlier this year, they commemorated something of a milestone: despite the historic nature of the 2017 hurricane season, the death toll in Texas (from Harvey) and Florida (from Irma) was surprisingly low, below 100 in each case.

These victories weren't simply a matter of accurately projecting the track of the devastating storms. They also underscored growing confidence in forecasts' reliability. Emergency officials are now willing to activate response plans well in advance. (The path of Hurricane Maria, experts say, was well forecast; the fatalities in Puerto Rico are more indicative of the difficulty of



Calculate changes
Supercomputers
integrate atmospheric
physics equations to
predict how weather
evolves across the cubes



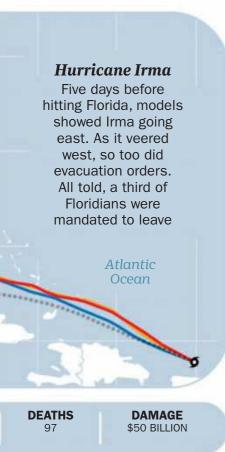
Visualize results
The computer translates
data into visuals showing
the storm's direction, rainfall,
sea-level pressure and
other elements

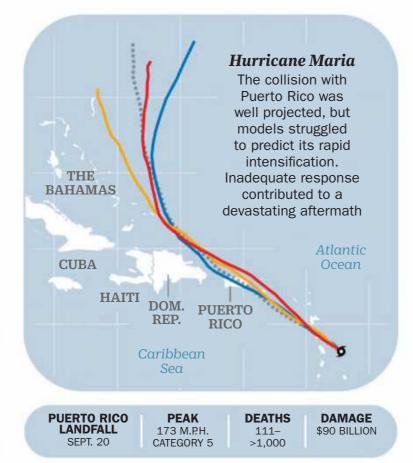


Forecast

Meteorologists interpret
the data to produce forecasts
and decide when to issue
watches and warnings for
dangerous weather

model outperformed the current U.S. model and, in some cases, the Euro model





NOTE: MARIA'S DEATH TOTALS ARE IN DISPUTE. SOURCES: NOAA, NEWS REPORTS. TIME GRAPHIC BY EMILY BARONE AND LON TWEETEN

evacuating on an island and the woefully insufficient disaster response.)

In the case of Irma, Florida Governor Rick Scott was persuaded to declare a state of emergency six days before the storm's predicted landfall, when it was still more than 1,000 miles away. "Our confidence level is building to the point where we can actually start talking about the potential storm system as a hurricane even before it develops," says Uccellini, the NWS director. "We were actually preparing for Irma ... while it was still a wave coming off of Africa."

In 1997, 48-hour forecasts of hurricane tracks were off an average of 150 nautical miles. Last year the track error was down to 56 miles. And the cone of uncertainty,

familiar now to most from hurricaneforecast maps, has been shrunk by 15% from five years ago and more than 30% from 10 years ago.

storm Sandy was a wake-up call for U.S. weather forecasters. The European model's superiority at forecasting the superstorm's path in 2012 shook up the weather community. When Congress approved additional budget in the aftermath, it included \$309.7 million in supplemental funding for NOAA, including money to upgrade supercomputers to improve the performance of the computer models. NOAA and the weather service also launched an effort to over-

haul the main model itself—a process that led to the selection of FV3 as the new dynamical core.

Some weather experts say the U.S. still isn't doing enough to get better. Cliff Mass, a professor of atmospheric sciences at the University of Washington, is one of the best-known and most outspoken critics of the NWS. He panned NOAA's decision to select Lin's approach for the model and says the nation's weather research and forecasting, spread among centers across the country, is too diffuse, in sharp contrast with the tightly focused work by the European Centre for Medium-Range Weather Forecasts. "The Europeans work together," Mass says. "They have an organized, strategic way of doing this."

Now that NOAA has locked in Lin's model, Mass wants to see a commitment to ongoing improvements—a sentiment shared by Lin himself. "The way you catch up to the other guys," Lin says, "is to keep improving faster than them."

There are advances underway well beyond computer-model upgrades, and in many cases the U.S. defines the cutting edge. GOES-16, a new weather satellite that was launched in 2016 and became operational late last year, is providing unprecedented imagery of storms and the atmosphere, and can even observe lightning from space, which can help improve tornado-warning lead times. (A sister satellite launched this year, GOES-17, is now in a testing phase and has suffered some technical problems, but is also sending back astounding views.)

NOAA expects to eventually improve the reliability of forecasts 30 days out, and even advance overviews of the entire hurricane season. On May 24, NOAA issued its 2018 Atlantic hurricane-season forecast, predicting a 70% chance of 10 to 16 named storms, of which five to nine could become hurricanes, including one to four major hurricanes—a near or above-normal outlook.

With the first day of school just a few weeks away, Alan Walters is keeping a close eye on those outlooks back at his Georgetown County schools office. "The more notice we can get, the better," he says. He just hopes that, whether those storms require a canceled football game or mass evacuations, the families of South Carolina heed the warnings.

Frontiers of Medicine

# New Hope for Alzheimer's

A breakthrough study suggests that a lifestyle change may help ward off dementia By Alice Park



#### Health

MARGARET DAFFODIL GRAHAM TRIES to live a healthy life, particularly since she has a health issue that requires constant attention. Like more than 100 million other Americans, the 74-year-old from Winston-Salem, N.C., has high blood pressure, and she has been taking medication to control it since she was in her 30s. So when she read that her nearby hospital, Wake Forest Baptist Medical Center, was looking for people with hypertension to volunteer for a study, she quickly signed up, knowing the doctors would monitor her blood pressure more intensively and hopefully lower her risk of developing heart disease and stroke.

What Graham didn't realize was that by joining the trial, she wouldn't just be benefiting her heart. The study, called SPRINT MIND, was designed to test whether aggressively lowering blood pressure would have an effect on people's risk of cognitive decline, including symptoms of dementia related to Alzheimer's disease.

Indeed, the trial's results are now the first solid confirmation that lowering blood pressure reduces the risk of both mild cognitive impairment (MCI), a degree of brain decline that's considered the gateway to dementia, and probable dementia. It was a revelation to Graham as well as others who volunteered. "It never occurred to me that controlling my blood pressure could protect me from dementia," says Arthur Lane, 89, another participant in the study. "I think this is wonderful."

Some 150 million people worldwide are expected to be affected by dementia by 2050. And while there are many ways people can change their behavior to lower their risk of heart disease and cancer—such as eating a healthy diet, exercising and avoiding or stopping smoking—there are few similar steps that have been scientifically proved to reduce the risk of degenerative brain disorders like Alzheimer's. Genes play a prominent role in determining who will develop the disease, and age is also a major factor—neither of which are under human control.

That's why Alzheimer's experts have focused their attention on developing drug treatments for the disease. But these haven't yielded any success 5.7 million

Number of people in the U.S. currently living with Alzheimer's disease

14 million

Number of people in the U.S. who are **expected to have Alzheimer's** by 2050

\$277 billion

Amount that Alzheimer's and other types of dementia will cost the U.S. in 2018, including insured, out-of-pocket and uncompensated health care costs

\$7.9 trillion

Amount in health care costs that will be saved over the lifetimes of people living with the disease if better ways to diagnose Alzheimer's early become available

5

Number of **drugs approved**by the Food and Drug
Administration to treat the
symptoms of Alzheimer's,
but not the root causes

thus far. In fact, in the past year, many major pharmaceutical companies have either stopped research on Alzheimer's treatments after early studies of their drugs failed to show they were effective or decided to move away from developing treatments for neurodegenerative conditions altogether. "The data are pretty soft on a lot of things," says Dr. Ronald Petersen, director of the Mayo Clinic Alzheimer's Disease Research Center, "so that was discouraging for the field and discouraging for the general public."

That may finally be changing. The study that Graham and Lane joined provides the strongest evidence yet that there may be something in people's control that lowers their risk of cognitive decline. The results of the trial, which was funded by various agencies in the National Institutes of Health, were presented at the annual meeting of the Alzheimer's Association in Chicago in July and immediately buoyed the hopes of Alzheimer's experts. "It's one of the first real demonstrations of a lifestyle modification having an impact on latelife cognition," says Petersen, who was not involved in the study.

**THE SPRINT MIND** study involved more than 9,300 elderly people who had had heart problems or were at higher risk of developing heart disease-some because they had high blood pressure, like Graham and Lane. They were randomly told to lower their blood pressure to either less than 120 mm Hg or 140 mm Hg systolic. (Current guidelines, revised in 2017 after the study began, now recommend that most people keep the upper number, or systolic pressure, under 130 mm Hg.) They were tested over an average of three years on various cognitive skills, including memory and processing of new information.

Biologically, it makes sense that blood pressure would affect dementia, says Dr. Jeff Williamson, chief of geriatric medicine at Wake Forest School of Medicine and the leader of the study. He compares having the right blood pressure to maintaining air pressure in a car's tires—not too high, not too low. "Over time, high blood pressure can damage the walls of very fragile arteries that deliver blood to the brain and other organs," he says. "And that can produce

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#### Health



some of the things we see associated with dementia: inflammation and small strokes."

After an average of three years, people who lowered their blood pressure to less than 120 mm Hg lowered their risk of developing MCI or probable dementia as measured by the tests by 15%, compared with people who lowered their blood pressure to 140 mm Hg.

"Controlling blood pressure is not only good for the heart but good for the brain," says Williamson. "This is the first intervention of any kind that has proven in a randomized trial to reduce the risk of mild cognitive impairment."

While the study only found a reduction in probable dementia, that doesn't mean blood pressure can't affect

Controlling blood pressure isn't just good for the heart; people who lowered their readings reduced their risk of mild cognitive impairment

full-blown dementia. Because dementia takes longer to develop than MCI and the study followed people for only a relatively short period of time, more cases of advanced cognitive decline might not have been detected.

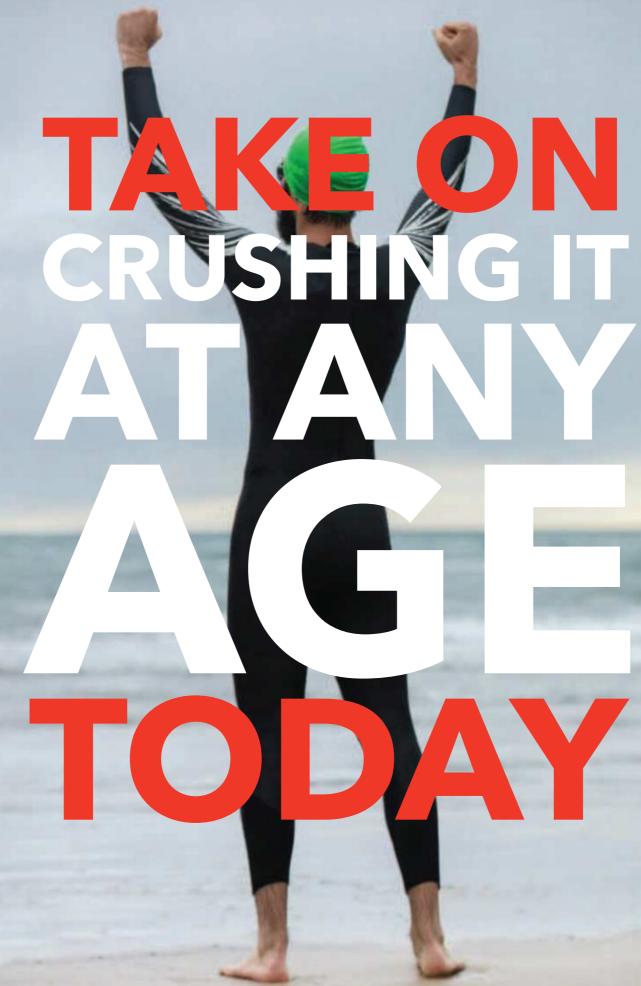
Still, it's the first time that scientists have found something that can lower even MCI risk in a rigorous, randomized trial. "This provides great encouragement for people to say, Yes, make sure your blood pressure is well controlled, because right now, it's one of the things you can do," says Williamson. "This opens the door to testing more interventions."

THE TRIAL'S RESULTS come on the heels of other evidence that controlling blood pressure may be an important weapon against cognitive decline. Another recent study, published in Neurology by researchers at the Rush Alzheimer's Disease Center, found that people with higher blood pressure over a long period of time during their later years tended to have more brain lesions, or areas of dead brain tissue where nerve cells had lost their ability to communicate with one another. They also had more tangles of tau protein, another hallmark of Alzheimer's that tends to appear later in the disease, which the researchers found when they performed autopsies on the participants.

"We wanted to look at actual changes in brain tissue that are affected by blood pressure," says Dr. Zoe Arvanitakis, a professor of neurological sciences at Rush and one of the study's authors. "Our results show that we need to do more research on how changes in blood pressure among the elderly relate to changes in cognitive function and dementia."

That understanding could lead to treating Alzheimer's as well as other dementias the same way that cancer and some infectious diseases are treated, with an array of therapies. Petersen, the Mayo Clinic researcher, for example, sees the latest blood-pressure study results as a step toward establishing treatments for Alzheimer's that combine lifestyle changes and medication. With growing evidence that Alzheimer's is caused by a multitude of factors, he believes treating the disease will likely





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#### Health

require more than just effective drugs.

"There is almost certainly going to be combination therapy for Alzheimer's down the road," Petersen says. "And lowering blood pressure is part of the picture."

Critical to making that happen are effective medications, and there are finally some promising drugs for Alzheimer's that are now being tested. Unlike current drugs for the disease, which address only the symptoms of cognitive decline and not the root causes of Alzheimer's, these could be the first to actually slow or even reverse the damage to brain nerves that cause memory loss, disorientation and other problems related to thinking skills. While trials of previous candidates have yielded mostly disappointing results, the latest studies on two drugs, BAN2401 and aducanumab, show they may shrink the amount of disease-causing protein plaques in the brain and could even slow the progression of cognitive decline (see sidebar, right).

Until these new drug treatments complete the final phases of testing, the SPRINT MIND study offers more immediate hope for battling dementia.

For Graham, the findings have reinforced her motivation to keep her blood pressure as low as possible. "I can deal with my body failing, but without your mind, there's nothing," she says. "So I do what I need to do to keep my body fit and hopefully not lose my mind."

As part of her efforts, Graham takes long walks, does her own yard work in the summer and makes regular trips to a local YMCA to train with weights to maintain muscle strength. She is grateful that her contribution to the study means that more people may be able to avoid developing MCI or even dementia. "I can leave some type of legacy in this world," she says.

Lane, who is retired, and his wife Diane are hoping that his participation in the study will inspire their family members to lower their blood pressure—especially their two children who have hypertension. "I guarantee you this will be a discussion that we have with all of our children," says Diane. Having a way to control their future risk of dementia, she says, "puts the ball back in our court."

RESEARCH

#### More prospects for Alzheimer's prevention

#### ALCOHOL

Drinking in moderation can lower the risk of heart disease and Type 2 diabetes. But it's less clear how alcohol affects the brain. Some studies have found that moderate drinking may be good for the brain, but these have focused on elderly people and their recent drinking habits, making it hard to draw any conclusions about lifetime drinking patterns.

However, in a new study of more than 9,000 middle-aged people who were followed for 23 years in the U.K., researchers found that those with an excessive drinking habit or none at all had a higher risk of dementia than those who drank moderately. People who imbibed more than 14 units of alcohol a week—the equivalent of eight glasses of wine in the U.S.—increased their risk of dementia by 40%, compared with moderate drinkers, while teetotalers had a risk 74% higher than moderate drinkers.

Excessive alcohol may be damaging to brain neurons and can therefore compromise cognitive function, the scientists believe. Abstaining, on the other hand, may deprive the brain of some of the potential benefits of alcohol in keeping blood flow strong, which nourishes the neurons involved in higher brain functions.

#### **PREGNANCY**

In the U.S., two-thirds of the 5.7 million people affected by Alzheimer's disease are women. Could their reproductive history—when they begin their period, how many children they have and when they start menopause—play a role?

Two recent studies arrived at opposite answers. One study found that women who have three or more children have a 12% lower risk of developing dementia, compared with women who have one child, while the

other study determined that women who have five or more children have nearly twice the risk of showing signs of Alzheimer's, compared with women who have fewer children.

The conflicting results may reflect two ways that women's exposure to reproductive hormones affect the brain. It's known, for example, that while estrogen can protect against brain decline, extreme exposure (which can occur during pregnancy) may be harmful. The authors of both studies agree on one thing: the research to better understand how pregnancy and periods affect the brain is only beginning.

#### DRUG TREATMENTS

The drugs available today for Alzheimer's disease aren't designed to treat what's causing the slow decline in thinking skills; they can only address the symptoms and, in the best cases, slow the deterioration of nerves

Stopping the degeneration from happening is the goal of the latest group of Alzheimer's treatments, which are designed to stick to the amyloid protein plaques in the brain that strangle nerve cells and to then mark them for destruction. Researchers reported promising results from a recent study of one such anti-amyloid drug, BAN2401, which seemed to reduce the burden of amyloid in the brain; this appeared to translate into a slower drop in cognitive test scores, compared with people who weren't receiving the drug. Another experimental drug, aducanumab, also recently showed encouraging results in reducing the amount of amyloid in the brains of people with Alzheimer's. If they continue to prove effective, drugs like these could be combined with other strategies, like lowering blood pressure, to slow the progression of Alzheimer's before it robs people of their ability to think and live independently. —A.P.



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**REFERENCES: 1.** FreeStyle Libre User's Manual. **2.** Data on File. Abbott Diabetes Care.

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Culture

### SPIKE LEE WANTS YOU TO WAKE UP

The director's provocative new film *BlacKkKlansman* will change the way you think about racism

BY REMBERT BROWNE

PHOTOGRAPHS BY CARRIE MAE WEEMS FOR TIME





#### Culture



IT'S A PICTURE-PERFECT DAY ON MARTHA'S VINEYARD. Families stream by on a heavily foot-trafficked thoroughfare, while white men in cargo shorts dock their boats and crack open their beers. In the middle of it all is Spike Lee, sitting on a bench, delivering an earful of Saturday-afternoon real talk. "Agent Orange is in office," he says. "If this isn't a motivation to get off our asses and register to vote, I don't know what is."

It soon becomes clear why Lee picked this spot. He wants to talk about President Trump and Barack Obama and Colin Kaepernick and the Ku Klux Klan. But why do that in private when you could do it loudly, outside, for everyone to hear?

Lee is on the island to shoot scenes for the second season of his Netflix show *She's Gotta Have It*, based on the 1986 film of the same name that launched his career. But he's also a regular in the area, having built a house in Oak Bluffs in 1992 while making *Malcolm X*. Even though the Vineyard has deeply entrenched roots in black America, with black families sprinkled in every establishment I walk into on this late-July day, Lee still stands out.

It isn't just his recognizable face. Lee is wearing a Mars Blackmon backpack (his iconic character from the original *She's Gotta Have It*) and a hat that reads BLACKA, with each A replaced by a Klansman's triangular white hood.

Spike Lee is a subversive walking advertisement for both Spike Lee and his new film, *BlacKkKlansman*, out Aug. 10. It premiered in May at the Cannes Film Festival, where it won the Grand Prix award, the second most prestigious prize of the event. Based on the early-1970s true story of Ron Stallworth, the first African-American detective to work for the Colorado Springs police department, the film centers on Stallworth (played by John David Washington) and a veteran Jewish cop (played by Adam Driver) as they find a unique, and risky, way to infiltrate the Ku Klux Klan.

BlackkKlansman is Lee's most critically heralded and accessible effort in over a decade. The film represents another opportunity for one of society's most distinctive voices to make a statement at a time when America's politics on race and identity are at their most fractured in a generation. The film is also being released on the anniversary of a white-supremacist rally in Charlottesville, Va., and a counterprotest that resulted in the death of 32-year-old Heather Heyer, after a Nazi supporter drove a car into the protesters. Footage from Charlottesville serves as the film's coda, a necessary gut punch both for those who internalized the film as another dark reminder of our country's history and those who wrongfully spent two hours treating it as a buddy-cop comedy. The timeliness of the film—and its early acclaim—has prompted many people to declare that Spike

Lee is back. (Did he ever leave? More on that later.)

The project came to Lee by way of Jordan Peele, a producer on the film. His directorial debut, *Get Out*, which is also a sophisticated commentary on race in America that is routinely (and not quite accurately) described as a comedy, became a box-office sensation last year and earned Peele an Oscar for Best Original Screenplay.

When Lee committed to the film, he called Washington—the son of Lee's longtime friend and collaborator Denzel Washington—and told him to read Stallworth's book, *Black Klansman*. "I told him, 'I knew you before you were born," says Lee. "I didn't have him audition or read. Even before I sent him the script, I knew brother man could do it."

The film begins abruptly, with a scene of Scarlett O'Hara at a train yard after the Battle of Atlanta, from the 1939 film—and American institution—Gone With the Wind. As she makes her way through the rows of the injured and deceased, the minstrel song "Old Folks at Home" provides a soundtrack to the slaughter. The camera then zooms out to show a tattered Confederate flag waving proudly.

Lee saw *Gone With the Wind* as a student in New York City on a class trip, when it was reissued in theaters. "There was no discussion afterward for historical context, no discussion about Hattie McDaniel and Butterfly McQueen in those stereotypical roles," he says. "It was, 'Wasn't it great?,' and that was it."

This selective understanding of American history continued to rear its head as Lee marched into adulthood. The older he got, the more frequent he found it to appear—and the more he knew he needed to not only learn the truth, but also tell the truth. He recalls being shown 1915's *The Birth of a Nation* as a student at New York University's film school. "They lectured about D.W. Griffith and his film," Lee says. "But the social and political implications of the film were never discussed." During that period, the KKK was largely inactive. "The film brought about the rebirth of the Klan," Lee says. "And therefore, it was directly responsible for black people being murdered and lynched. Never discussed."





You learn all of this in *BlacKkKlansman*. That should come as no surprise, once you understand what Lee truly cares about. There are three intertwined ideas that he routinely returns to, both as a black American and as an artist who is dead-set on holding up a mirror to society, ever hopeful that we'll eventually open our eyes. Spike Lee wants us to wake up. He wants us to start being honest with ourselves about this country. And he is begging us to educate ourselves about our history.

GETTING SPIKE LEE GOING is delightful if you know how to hang, how to spar and how to shut up. On this bench, the angry Spike Lee I've been hearing about my entire life is nowhere to be found. Is he brash, contrarian and intellectually intimidating? Absolutely. Does he have an air about him that suggests wasting his time will not be tolerated? Completely. And I love it, for the same reason I always loved getting my black uncle going about politics, race and his issues with Obama, in a room full of family members to whom 44 could do no wrong.

Lee vacillates between talking with you and talking at you, as if every moment could be his last opportunity to say his piece. But when he gets to the end of one declarative statement, he smiles at you and then says some version of: "And another thing ..."

Lee has used the refrain "Wake up" in many of his films; it's the first line in *Do the Right Thing* and the last line in *School Daze*. You also hear it in *BlacKkKlansman*. To some, his repetition can feel heavy-handed. In *BlacKkKlansman*, he refuses to let the viewer miss the parallels between racism in the 1970s and today; between law enforcement then and now; between the Klan and the so-called alt right;

#### A HISTORY IN PICTURES

Weems created a grid to celebrate Lee's career as a filmmaker, beginning with breakouts *She's Gotta Have It* (1986), *School Daze* (1988) and *Do the Right Thing* (1989). The director has always tackled issues of race and identity in culture: "One of the constant criticisms for *Do the Right Thing* was that Spike would not provide the answers for racism," Lee says.

#### Culture

and between KKK grand wizard David Duke and President of the United States Donald Trump. At one point, Stallworth tells his white sergeant that "America would never elect somebody like David Duke President." His sergeant's response is telling: "For a black man, you're pretty naive."

This is Lee's way of wondering when black people, liberals and Americans in general will stop falling for what he repeatedly calls the "okey-doke." By that he means the tricks—which Lee calls the skulduggery, the shenanigans, the subterfuge and the bamboozlement—that straight, white American men masterfully use to stay in control. Lee is a student of history, and so he understands where these tricks are hiding and what form they might take in the future. He's obsessed with the okeydoke. And it explains so much of why Lee is the way he is.

For decades now, Spike Lee has been characterized as indignant, a coded way of saying, "Why, rich man, are you still so angry?" It's a common trap: mainstream society can make successful black people prioritize smiling more and complaining less. And many successful black people, as Lee sees it, forget who they are and who came before them. "People become delusional and think they're not black anymore because they are accepted—it's the okey-doke," Lee says. "You can say that now, but they still think you's a nigger."

Lee knows this because of what history has shown him. He has seen how the U.S. has watered down the legacies of some of the great black Americans in the spirit of moving on by way of covering up the scars. "And another thing," Lee says, pointing at me. "In his later years, Muhammad Ali became a national hero, a global hero." But before that, Lee says, Ali was vilified for his opposition to the Vietnam War. By the end of Ali's life, most of America acted like it had never happened.

When Lee speaks about what happened to Ali, what happened to Martin Luther King Jr. and other radicals, you know he is dealing with the anxiety of what America will do to him, when it's all said and done. It's one of the reasons why Lee is so loud, so brash and seems to never take his foot off the Spike gas—

Americans haven't earned the right to be comfortable around him yet. What James Baldwin said in 1968 could apply to Lee in 2018: "It is not for us to cool it."

He's always drawing boundaries, because he never wants to be sanitized. And simply existing as black in any white space requires grappling with the so-called benefits of being seen as "safe." This way of thinking permeates society today, from art to politics to sports. "There's this thinking that athletes should just run up and down the field, run around the bases, run down the court, play ball and shut the f-ck up," Lee says. "But there's a history of that not being the case. And the powers that be don't like that."

This feeling is exacerbated by a President who has moved from coded dog-whistling to what goes well beyond that, including consistent public attacks on prominent black Americans. Trump's

#### 'NO PEOPLE HAVE BEEN MORE PATRIOTIC THAN BLACK FOLKS, WHO SHOULDN'T BE.'

recent tweets about LeBron James' subpar intelligence are a prime example. "He has a thing for black athletes," Lee says. "He does not like them brothers making that money." But it runs even deeper than that. "This stuff is all planned," he continues. "The sneaky thing is, he tried to start some sh-t between Michael [Jordan] and LeBron. That's the old divide and conquer."

The ugliness of this current climate is front and center in *BlacKkKlansman*. There's a line in the film, repeated four times by a propagandist played by Alec Baldwin who is hell-bent on spreading fear of blacks and Jews, that sums up the then and the now: "We had a great way of life."

Like so many things in the film, the parallels between the 1970s and now are stinging. That propagandist's line registers because it's a sentiment that is felt today by so many—even those

who aren't outright racists. It's the line I consider as I watch Lee bark loudly about Trump (whom he continues to refer to as Agent Orange) being a direct response to having eight years of a black President, within earshot of people who are just trying to enjoy their vacation, without having to think about all that.

"This brings me to another point," he continues. "Let's stop telling lies and teaching young people bullsh-t. The United States of America's foundation is genocide of native people and slavery!"

At this point, Lee is at his loudest. He laughs every time he brings up something obvious. "That's the foundation—the very fiber," he says, standing up on the sidewalk, with three men on their boat watching him. "No people have been more patriotic than black folks, who shouldn't be."

A man steps off his boat and interrupts our conversation: "Are the Yankees done now?"

This is the fourth person to stop Lee during this hour on the bench. One was a white woman who shook his hand and then said, "I can never wash my hand," prompting him to uncomfortably reply, "Don't say that," prompting her to uncomfortably say, "I'll wash it. Good night!" even though it was 12:35 p.m. The other two also wanted to talk about sports. People love to talk to Lee about New York City sports, a state he brought on himself by being a very public fan of his home baseball and basketball teams.

These are the moments when the wall Lee has built against the okey-doke shifts enough to be cordial. He entertains what must be a daily conversation with a stranger about the Knicks and the Yankees. Yet in times like this, his guard isn't down but twice as high, because this is when others get too comfortable as conversations about his work take a backseat to sports. It's a reminder that much of white America is still terrified to engage with the work of Spike Lee but would love to chat about courtside theatrics. Sticking to sports is one of the easy ways to sprint toward equality without dealing with our history.

"To use football terminology, it's a classic misdirection play. They're masters at it," Lee says. In this context, they refers to everyone from a white man talking about sports to members



of the Republican Party to any group of powerful whites. "It's well-conceived, well-disguised. So we, as a people, as American people, have to really stop going for the okey-doke. We have to be smart and not go for these distractions."

Bringing his voice down, he leans over and says, "And you know they're calling me every type of nigger when they do that sh-t."

when I saw Lee's movie *Bamboozled* in 2001 as a high school freshman, I had only been around white people for four years. My mother was a tactician when it came to raising a black boy, but she saw how accepted I had become at my predominantly white, progressive Atlanta private school, and she was terrified of how that would shape my identity and erase my blackness. The magnetic force of perceived assimilation was growing stronger. My mother needed some assistance. Enter Spike Lee.

Watching that movie in my living room on a Sunday evening, I felt feelings I'd never felt—bad ones.

Monday morning, I went to school angry. And while I didn't stay angry, I knew too much to ever return to simply smiling and nodding and acting as if everything were fine.

"That must have messed you up, huh," Lee says with a smile, followed by a loud, singular chuckle that led to a few heads swiveling in our direction.

Bamboozled—a movie that draws a line from minstrelsy to Hollywood—is important, just as BlacKkKlansman is important, because Lee makes movies to reopen wounds that white America would like to pretend have healed. He's a provocateur who clearly knows what his role is: to say difficult things about both the history and the present state of race in America. A movie like Bamboozled wasn't appreciated at the time, because no one was ready to go there. Almost two decades later, with BlacKkKlansman, the public is learning how to open its eyes at the same time a filmmaker is improving his delivery. Yet the declaration that Spike Lee is back turns out to be a surprisingly underhanded compliment.

"Hmm. What's that famous Brother Mark Twain quote?" Lee says, grinning mischievously. I don't readily know—the man said a lot of things. "It's something about, 'My death is,'" Lee says, trying to remember. Clearly it's part of an important comeback. "Look it up," he says. "Google it. Google it now."

I find what he is looking for: "The reports of my death are greatly exaggerated."

"'He's back?" Lee says. "Where'd I go?"

Even when he's joking around, he

Adam Driver, left, in BlacKkKlansman, with John David Washington, whom Lee has known his whole life: "I didn't have him audition," Lee says

never takes his work lightly. "I've been doing this for the last 30 years. I think it's very important people understand that Kevin Willmott and I—the cowriters on the film—are filmmakers, but we're also both tenured professors of film. So we're not f-cking around. This is our life. This is our lifelong pursuit. We take this sh-t seriously."

WE LEAVE THE SOAPBOX of a bench and begin walking to Nancy's, a seafood restaurant. Unclear what we are doing, I follow Lee to the counter. "Is Doug here?" Lee asks a line cook. Someone leaves to go look for him. Lee's on his Blackberry, texting, and those around are beginning to take their phones out to take pictures of him. Two minutes later, a white guy with a beard and a trucker hat walks toward us. He and Lee embrace. Lee's entire demeanor has changed—he's excited about something.

Doug Abdelnour turns out to be the owner of the restaurant, which is next to a dock and, through that dock, his boat. The three of us are going on a ride.

"Step in the middle of the footstool," Abdelnour warns Lee as he prepares to enter the boat. I do the same. "I told Barack the same thing," Abdelnour says. "He didn't listen."

Lee likes the fact that Obama has been on this boat. The Vineyard may be a second home for him, but this is clearly an event. When we pull off, Abdelnour warns us that he's going to go a little fast. Lee puts his Nike hoodie on and puts his hood up, and advises me to do the same so I don't lose my hat. Abdelnour revs his boat up, and Lee lets out a brief roller-coaster-esque scream, extending his palm for a low-five.

About 10 minutes later, we slow down and Lee starts asking Abdelnour questions. Questions about Valerie Jarrett. He points to certain houses, asking, with an endearing youthful curiosity, who lives where. Diane Sawyer? Ted Danson? Carly Simon?

The morning Heather Heyer was killed, Lee says, almost exactly a year

#### Culture

ago, he was on the island. So was Obama. The former President plays golf on a course right by Lee's house. "I don't have his number," Lee says of Obama. "He ain't calling me. We ain't got it like that." (For their first date, Barack took Michelle to see *Do the Right Thing*.)

Lee had spent the morning, like many Americans, glued to the television. After seeing news from the counterprotest, Lee, taking a break from the coverage, went out to the 18th hole, in his backyard, where he saw Obama's Secret Service agents. Lee then walked up to Obama. "I said, Mr. President, did you hear what happened in Charlottesville? He hadn't." So Lee told him. "I could see on his face—that shock. It was Aug. 12, year of our Lord, 2017." (A spokesperson for Obama declined to comment.)

When Lee first saw the footage, he says he knew he had found the ending to his movie. "I saw this horrific act of homegrown, red, white and blue, cherry-pie terrorism," Lee says.

Part of what Lee found so profound was the death of Heyer. He called her mother Susan Bro, to ask permission to use footage of her death in the film. "What can you really say to anyone who loses her child?" Lee says. Bro told him that there had been criticism of how Heyer, a white woman, had been lionized in the media when the deaths of so many people of color go unnoticed. Lee didn't care. "I consider her a martyr," Lee says. "It don't matter what nobody else says."

In Charlottesville, Americans were forced to reckon with the reality that we live in a country where white supremacists can parade openly, and without condemnation from the White House. We allow for the slaughter of unarmed black children and the mass incarceration of people of color. A black President who had to be publicly perfect for eight years was followed by a white President who is habitually dishonest. So many Americans were lulled into complacency by the progress that Obama's presidency signaled, and the symbol he represented. Yet all gains can easily be lost, particularly in a society stacked against anyone who threatens the dominant order. Lee has been trying to tell us this for more than 30 years. He's hoping we're ready to listen.

#### CONNECTED EVEN WHEN DIVIDED

By Stephanie Zacharek

The 1979 disco hit "There but for the Grace of God Go I." by Machine—used beautifully in Spike Lee's 1999 Summer of Sam, set in a hot, distraught New York City under siege by a serial killer—tells the story of a young Latino couple determined to raise their baby daughter anywhere but the place she was born, the Bronx: their ideal is a place with "no blacks, no Jews and no gays." All of Lee's movies, stretching across a career that includes a wartime drama (Miracle at St. Anna), a superb documentary about Hurricane Katrina (When the Levees *Broke*) and a raucous modern-day version of Lysistrata (Chi-Raq), address racial tension, inequality or violence in some way. Not all of his films work perfectly. But they're nearly always about community, about groups of people who band defensively to shut others out, or open their ranks in the hopes of achieving some shaggy yet triumphant sense of unity.

Lee's best movies—including his latest, *BlacKkKlansman*— seek to bridge the chasms that threaten to crack American culture apart. *Malcolm X* (1992) covered the activist hero's leadership role within the Nation of Islam and,

later, his attempts to break from its rigid separatist teachings. The suggestion is that hard-line solutions don't leave enough room for humans to breathe, or to change.

And because New York City has always been his home, Lee often uses it as a setting for stories where frustration with other human beings boils over, often dangerously. When you live in New York, there are days when everyone is right in your face. Do the Right Thing (1989) is the quintessential study—sometimes funny, sometimes horrific-of what can go wrong when garden-variety disrespect, the sort of thing that can often be defused quickly with the right words and gestures, erupts into blazing violence.

Do the Right Thing reflected the real-life tensions that were detonating in the city at the time. The 9/11 attacks changed the city's story yet again, and provided the ghostly scrim of a backdrop for Lee's greatest film, 25th Hour (2002), based on David Benioff's novel. This story of a New York drug dealer (Edward Norton) spending his last day of freedom before serving a seven-year jail term is Lee's raggedly optimistic love letter to this godforsaken place and all who live in it. It's a recognition of the truth that even when we're angrily jostling elbows, the everyday encounters that keep us connected mean everything. What else is there to live for? A community with no blacks, no Jews and no gays is no community at all.



Lee received an Oscar nomination for Best Original Screenplay for Do the Right Thing; he also appears in the film, which he directed

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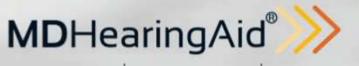
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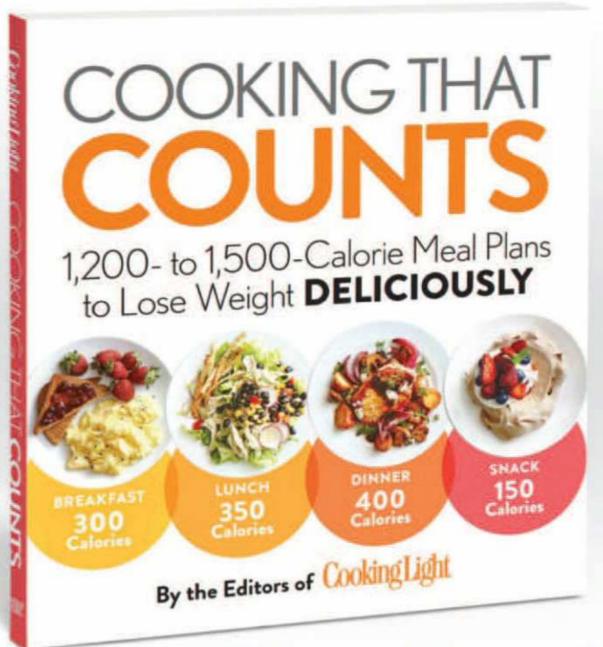






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### Time Off



A SULLEN PREHISTORIC SHARK CONFRONTS JASON STATHAM IN THE MEG ISSA RAE MINES MILLENNIAL INERTIA IN THE NEW SEASON OF INSECURE LAURA VAN DEN BERG'S LITERARY TAKE ON THE TROPES OF HORROR

#### TimeOff Opener

MUSIC

#### Mitski makes a case for the outsiders

**By Raisa Bruner** 

fly home for the holidays. It was late 2017, and the raw-edged indie rocker, who performs under her first name, was fresh off a two-year world tour that ended in Australia. Instead, she took herself to nearby Malaysia. Lonely, devoid of instruments and itching to turn her frustrations into music, she went to a local Toys "R" Us and bought a toy piano. On that piano she wrote "Nobody," a glittering single off her new album, *Be the Cowboy*, out Aug. 17. Beneath its disco-ready chords, "Nobody" is a song about a young woman grappling with isolation.

"For a long time, I didn't believe I could be a musician," Mitski says now, over tea in Manhattan. "I didn't see anyone

'When you don't see an example of something, it's very hard to imagine it.'

MITSKI

like me doing what I wanted to do." By "like me," she means different. "I was an Asian girl who wasn't hot, who wanted to write my own music," she explains. "When you don't see an example of something, it's very hard to imagine it."

Mitski, who has been touring for more than five years, has opened for Lorde and captured critical praise for the strength of her first albums. But on a July afternoon in New York City,

she still goes by unnoticed. For Mitski, making music isn't a choice—it's a calling. Without her career, she doesn't think she would even be alive. "I was really self-destructive," she says, "until I realized there was something I could create and do."

**BORN IN JAPAN** to a white American father and a Japanese mother, Mitski's family rarely stayed in one place for long; at times she has called the Democratic Republic of Congo, Malaysia and the Czech Republic home. Even now, she stashes her stuff at her father's place in the States but doesn't claim a permanent address. After switching from studying film to pursue music at SUNY Purchase College, Mitski released haunting, piano-forward songs on her own before making a name for herself with 2014's Bury Me at Makeout Creek and 2016's well-received Puberty 2. Direct in her lyricism, Mitski has bold guitar skills and an unflinching stage presence. In "Your Best American Girl," her most popular song to date, she outlines the particular pain of being different: "I guess I couldn't help trying to be your best American girl." The message is a mix of her unique experience as a Japanese-American nomad navigating love and our universal fear of rejection, and also functions as something of an artist statement: Mitski isn't your average American rock star, but she's giving it her best shot. Over time, she has nabbed top spots at festivals like Coachella and received nods from icons like Iggy Pop, who called her the "most advanced American songwriter that I know." It has taken constant work



Mitski is used to playing traditional rock crowds:
"When everyone at the bar looks like Bukowski," she says, "it's a great way to learn how to draw those people in."

to get where she is now—and she's not done proving herself.

Her rock bottom was a show several years ago at a Manhattan dive bar with an audience of zero; the sound guy tried to cut her set short. "From there, I played 2,000 more shows, and I kept playing to nobody, but as I did it, I learned ways to make myself heard," she explains of her stint in what she calls "performer's boot camp," an attempt to develop a thicker skin. Along the way she attracted a devout following of her specific brand of defiant, unfiltered and unfussy music, including young women, people of Asian descent and other listeners who Mitski says "feel like they're on the outside." That's exactly where Mitski herself is most comfortable. On her new song "A Pearl," a searching, guitardriven ditty, she finds a dark pleasure in personal pain. "I wrote it about having some kind of toxic thing inside you, but you still hold on to it, because it's just part of your identity," she says. Mitski, like her fans, is willing to claim her edges as important features. "If I ever was on the verge of being on the quote unquote



'inside,' I would sabotage myself in some way," she says. Glossy pop stardom and stadium headline tours aren't her goals.

Mitski isn't the only outsider in today's indie-rock scene, of course. Her contemporaries—particularly young female artists with cult followings like Lucy Dacus, Soccer Mommy and Snail Mail—also speak to the experiences of marginalized voices. The world of rock music is still dominated by white men, and historically it hasn't welcomed people like Mitski. While she allows that there's "more space than before" for their voices now, she's still not satisfied. As one of the only high-profile Asian women in mainstream music, she chafes at being labeled a representative of a diverse population. "I think a lot is put upon me," she says. Instead, she dreams of a future in which she doesn't have to be the face of "the entire continent of Asia. 'Cause it's very big."

That kind of symbolic status can lead artists to stagnation; they're stuck trying to please fans. But on *Be the Cowboy*, Mitski takes the reins on her own terms. The title comes from

#### Women pushing rock forward

Rock 'n' roll has long been a man's world, but these artists have staked a claim in the genre with their own distinctive sounds and devoted fan bases.



ST. VINCENT

On indie-rock experimentalist
St. Vincent's fifth album, 2017's

Masseduction, the artist—born
Annie Clark—balanced tender
balladry with punk-spiked melodies.



Grammy-nominated Aussie rocker
Barnett is known for her witty, folksy
songwriting and straightforward
delivery, as on her 2018 album,
Tell Me How You Really Feel.



British vocalist Florence Welch became a superstar with 2009's anthemic "Dog Days Are Over"; 2018's High As Hope sees her reach new emotional heights.

what she calls an "inside joke with just myself," a mantra to "be the cowboy you wish to see in the world," which she uses to combat feelings of impostor syndrome. "What would a white guy say? What would a swaggering cowboy riding into town do in this situation?" she asks. Her answer: make exactly the music she wants to make.

While her last album was appropriately called Puberty 2, this one finds Mitski, at 27, all grown up: there's polish and bounce underlying her clearvoiced delivery. On upbeat ballads like "Lonesome Love" and "Come Into the Water," echoes of classic rock and country, like the Beatles and the Dixie Chicks, seep into her melodies. "Washing Machine Heart" toys with toe-tapping '80s synths and asks a lover to "toss your dirty shoes in my washingmachine heart, baby, bang it up inside," while "Blue Light" begs for attention: "Somebody kiss me, I'm going crazy, I'm walking round the house naked." Seeking validation and a cure for alienation, Mitski layers the sharpest compositions of her career with some of her rawest lyrics. In the process, she maintains the texture of the live music she prefers—and explores what she calls "adult love," with all its messiness and unfulfilled desire. Mitski has made a conscious effort to keep her personal life private; as a result, she remains enigmatic. But by playing the game her way, she's trying to let her music speak for itself.

"I DON'T WANT your pity, I just want somebody near me," she croons lightly on "Nobody," and she might as well be asking for a few people to give her music the time of day. Almost every song in her discography is under three minutes. This isn't an artistic choice, Mitski stresses—it's tactical: "I'm not a straight white guy. No one's going to listen to me noodle for 45 minutes." Instead, she has made a career out of producing art that is "precise and concise," like her.

Back in the Manhattan tea shop, she finishes her matcha latte and asks for a to-go container for some leftover sweets. Later, she'll disappear into the city for a few days and crash at a friend's place to save cash. Then she'll head back out on the road, alone again.

#### TimeOff Reviews



#### Jason Statham is the perfect bait in The Meg

By Stephanie Zacharek

THERE ARE TWO GREAT MUGS IN THE MEG, AND ONLY ONE of them belongs to Jason Statham. The Meg's title character is a mammoth shark or, more specifically, a supposedly extinct megalodon, a sullen creature of the deep with tiny, disgruntled eyes and a frown of a mouth lined with deadly triangle teeth. Sharks are angry looking to begin with, and if you were a 75-ft.-long prehistoric specimen living peacefully in a hidden ocean paradise, you too would be surly if humans started poking around in your business. The Meg is miserable and mean, but when he-she? it?-is onscreen, you know you're in the presence of a star. Don't even try to look away.

The Meg isn't a real shark, of course, but a feat of specialeffects trickery. Statham is the real thing, and he's key to the effectiveness of this good-natured and often highly ridiculous adaptation of Steve Alten's 1997 sci-fi potboiler, directed by Jon Turteltaub (National Treasure). Statham plays Jonas Taylor, a rugged, deep-sea rescue dude who reluctantly agrees to help the staff of a fancy ocean-research laboratory: its founder and

Megabeast: helicopters are no match for an angry prehistoric shark in The Meg his sea-critter expert daughter (Winston Chao and Li Bingbing) have just spent a huge chunk of obnoxious billionaire Rainn Wilson's money to launch an ambitious ocean-exploration project. Then our bad-tempered beastie shows up. Need someone to dive off a boat and harpoon a prehistoric miscreant with a tracker? Jonas is your guy.

The Meg knows how silly it is, and Turteltaub and his actors make the best of dialogue that seems to hail from a time when dinosaurs roamed the Earth: "I can't get a signal." "That living fossil ate my friend." "Man vs. Meg isn't a fight. It's a slaughter." Statham is in on the fun, yet he somehow also floats just a bit above the movie's rampant absurdity. You believe every insanely unrealistic thing he does; his dignity is only reinforced by the velvety rasp of his voice. Man vs. Meg isn't a fight. But that's only because Statham makes it more of a dance.

#### What to stream now

By Eliana Dockterman

Ordeal by Innocence



A monstrous mother is found dead, her head bashed in by a decorative decanter. Her equally unlikable son Jack goes to prison for the crime and is killed there. That would be that—except the BBC and Amazon's Ordeal by Innocence is an Agatha Christie adaptation, so this

**MOVIES** 

#### Being gay in God's America

The idea of conversion therapy is so inhumane that it could be some alien race's idea of a sick joke. When it comes to whom we love and why, who can presume to declare what's a sin?

That's the question at the heart of The Miseducation of Cameron Post: Chloë Grace Moretz plays a 1990s teenager who's packed off to a special school called God's Promise in an effort to "de-gay" her. Directed by Desiree Akhavan and adapted from Emily M. Danforth's novel, the movie wears its good intentions proudly. The problem is that Cameron and her God's Promise friendsplayed, wonderfully, by Sasha Lane and Forrest Goodluckare so well-adjusted that there's not much room for dramatic tension. Still, these kids get to you. They're waging a battle they shouldn't have to fight, and it's pretty clear whose side God is on. —S.Z.



MOVIES

#### A transportive and sweet slice of Potato Peel Pie

DON'T BE PUT OFF BY THE OVERLY adorable title: The Guernsey Literary and Potato Peel Pie Society, streaming on Netflix, offers the kind of cushiony stealth charm that's easy to sink into. Lily James (most recently seen in Mamma Mia! Here We Go Again, as a younger version of Meryl Streep's Donna) stars as Juliet, a young London novelist who has found great success just after World War II, though she's also reeling from grief: her parents were killed in the war, and she has no place she can call home, literally or emotionally. Then she strikes up a correspondence with a pig farmer, Dawsey (Game of Thrones' Michiel Huisman), from Guernsey, a place still recovering from its own recent wartime horrors: the Germans who occupied the island have been driven out, but the locals carry aching memories of deprivation and near starvation.

Yet a small group of islanders—played by a superb ensemble that includes not just Huisman but also veteran actors Tom Courtenay and Penelope Wilton—found camaraderie and sustenance via an accidentally formed book club. (Originally it was just a ruse to throw the Germans off the trail of a roast pig they'd lucked into.) Now the war is over, but the club lives on, and Juliet pays a visit intending to write a story about it.

This is also a love story, most likely featuring the most handsome pig farmer in the history of film and television. Is *The Guernsey Literary and Potato Peel Pie Society*—directed



James: from London to Guernsey, with style

by Mike Newell and adapted from the novel by Mary Ann Shaffer and Annie Barrows—wholly realistic in depicting the hardship of postwar English life? No—but extreme realism isn't the point. Newell is one of those sturdy English directors who has lent his hand to an array of lively, vivid pictures, from widely seen and well-loved movies like Four Weddings and a Funeral (1994) to charmers that many have forgotten about, like the rejuvenating, watercolor-hued Enchanted April ('91). His warm, light touch, coupled with Zac Nicholson's lush, evocative cinematography (with ruggedly gorgeous Devon and Cornwall filling in for Guernsey as a location), make this idyll a pleasure. It's simply a movie that makes you feel welcome. -s.z.

whodunit isn't quite so clear. When the rest of this fractured family briefly reunites for a wedding, a stranger knocks on the door, offering an alibi for Jack. Everyone has a secret to protect, and no one can be trusted.

Ordeal by Innocence was meant to make a big Christmas



#### **BIG FAN**

Screenwriter Sarah Phelps has adapted Christie twice before: And Then There Were None and The Witness for the Prosecution debut in the U.K. but was delayed after one of its stars, Ed Westwick, was accused of sexual assault. Producers reshot the three-episode series with actor Christian Cooke; fortunately the seams don't show. Cooke joins a stellar cast that includes Bill Nighy, Anthony Boyle (Harry Potter and

the Cursed Child) and Matthew Goode, who's much more fun as a cad (as he is here and was recently in The Crown) than as the dutiful love interest he played on Downton Abbey. Unlike that costume drama, Ordeal by Innocence is bereft of charmers. That's exactly what makes it so charming.

#### TimeOff Reviews



Rae, left, was nominated for an Emmy for her performance last year

**TELEVISION** 

#### Insecure nails millennial fatigue

By Judy Berman

NOT MUCH HAPPENS IN A SEASON OF *Insecure*, but that's kind of the point. The HBO comedy follows creator and star Issa Rae's less successful alter ego Issa Dee, her friends and the men in their lives as they stumble out of their 20s unfulfilled and emotionally paralyzed. When the series began, Issa was frustrated with her job as the only black woman at a nonprofit that works in L.A. public schools. Her best friend Molly (Yvonne Orji), an elite lawyer, couldn't stop dating inappropriate men. And Issa's boyfriend Lawrence (Jay Ellis) had been out of a job for so long that his unemployment had hijacked their relationship. By the end of the second season, he had a job and they'd broken up, but nothing else had changed. This is what millennial inertia looks like.

The show's third season, which premieres on Aug. 12, marks *Insecure*'s biggest shake-up to date: following last year's gutting finale, in which he and Issa permanently part ways, Lawrence is out of the picture. Taking his place at the center of the story is Issa's once and maybe future boyfriend Daniel (Y'lan Noel). Too broke to rent a place of her own, she's crashing on his couch. When he brings home dates, she drives a Lyft (a gig that provides a few hilarious moments) and waits for him to text

that the coast is clear. Issa isn't sure what she wants out of him, but it isn't this.

In these new episodes, Daniel finally comes into focus: he's a hip-hop producer, which sounds glamorous, but in reality he's struggling as hard as anyone else on the show—for work, for name recognition and simply for respect in a hierarchical industry. (He confesses to Issa that he worries about dying an "unknown SoundCloud producer.") There's a disarming earnestness to their ongoing conversations about creativity.

In the absence of an elaborate story, it is Rae's talent for crafting authentic dialogue and relationships like this one that makes Insecure special. While last season emphasized the show's ensemble aspects, resulting in too many silly Sex and the Citystyle scenes of Issa and her girlfriends dissecting their love lives, this new season wisely plays to Rae's strengths with oneon-one real talk among the leads. Lawrence was a fascinating character—a smart guy stuck in a depressive holding pattern—not to mention the designated heartthrob on a show where the female gaze reigns supreme. But by letting Lawrence go, *Insecure* allows Issa's bonds with her friends to flourish, and the show is better for it. These characters may be inert, but the show is anything but. 

□ POP CHART
TIME'S WEEKLY TAKE
ON WHAT POPPED
IN CULTURE

A 10-year-old swimmer named Clark Kent Apuada broke a 100-m butterfly record set by Michael Phelps 23 years ago

A herd of about 100
goats went viral after
they were spotted
descending on the
lawns and gardens
of a neighborhood in
Boise, Idaho, and eating
everything in sight



#### "I will keep fighting."

DEMI LOVATO released a statement thanking her fans for their support nearly two weeks after being hospitalized for a reported drug overdose



Movie-ticket subscription service MoviePass is limiting subscribers to seeing just three movies per month, rather than one per day, in an attempt to burn less cash and stay in business

**NONFICTION** 

#### Life during wartime

Governments lie, but grunts live the truth. The (correct) premise of C.J. Chivers' The Fighters: Americans in Combat in Afghanistan and Iraq holds that the essence of those wars can be related through a handful of the Americans who fought them. It starts slow, dutifully introducing men who will, a few pages later, command both your attention and your breathing.

The events that befall a medic. a commando, a helicopter pilot, a soldier and a platoon leader come out of nowhere and stay forever. Chivers, a Marine before he was a reporter, inhabits his protagonists so vividly in real time that the death of one is an almost physical shock. There is an uprightness to The Fighters that's partly solidarity with its dads, patriots and drunks, and partly a clarity of thought that eluded those who kept sending them all to battle. The result is an authoritative, lived account of the post-9/11 conflicts—a work of nonfiction that reads like a novel and builds like an indictment. The final chapter, in which a wounded warrior meets George W. Bush, summons both The Grapes of Wrath and Portnoy's Complaint.

-Karl Vick



NSECURE: HBO; LOVATO: GETTY IMAGES; CHIVERS: TYLER HICKS—THE NEW YORK TIMES/REDUX

Chivers reported from Afghanistan and Iraq

**FICTION** 

#### The horror of an un-lost love

By Bethanne Patrick

ZOMBIES, AN ISLAND LOCALE AND AN elusive spouse—Laura van den Berg's new novel The Third Hotel contains all of the ingredients for a classic work of horror. But van den Berg is up to so much more than that, so she has no trouble pointing a big neon sign at her signifiers: protagonist Clare visits Cuba for a film festival headlined by a movie called Revolución Zombi.

Clare's husband Richard, killed in a hit-and-run, was a noted scholar of horror cinema. She has taken his scheduled trip to the festival, hoping to feel close to him. Weirdly, her hope is realized when she spots Richard out of the corner of her eve near a museum.

Clare herself has taken a room in the third hotel she contacted, a grubby place with a grumpy young woman named Isa at the reception desk. Again the author shines neon toward symbols. She has Clare tell us that she always travels with, but never finishes, a copy of Patricia Highsmith's The Two Faces of January, a book about a nasty con artist. Another character talks with Clare about humanity's purported "third eye," the seat of intuition and knowledge.

Van den Berg makes use of the horror-film trope of "final girls," the female characters whose survival gives the audience hope even as it points to their demise. Clare becomes fascinated by Revolución Zombi's own "final girl," actor Agata Alonso, whose glamorous aura seems to increase as Clare's departs in her hunt for Richard. (A very bad haircut is involved.) And that hunt involves clues, from an unopened white box to a small red notebook to calls from Clare's mother at home. Nothing is what it seems. Everything is seen through lenses fogged with loss and pain. Where was her husband now? Clare agonizes after his stateside funeral. Where do the dead go?

**THINGS GO BUMP** in the night, and so do ideas, with the overall effect that readers will be as unsettled as the protagonist at every turn. Clare tells us on the first



Van den Berg's buzzy new novel mystifies

page, "I am experiencing a dislocation of reality," an excellent description of grief, but also of modern Havana, a city that has recently opened to Western tourists but remains architecturally and materially beholden to its long communist past. Van den Berg throws Clare again and again into uneasy situations with inexplicable outcomes; this author has no fear of magical realism—and while she's already been compared to giants of the genre, The Third Hotel owes its eerie power to no one else.

Not every author can make a character both fly through supernatural events and remain grounded in a place the way van den Berg does with Clare. The strength of van den Berg's storytelling comes from Clare's attempts to solve the mystery of why Richard has hunkered down in a different country, layered with grief from back home that continues to haunt her. She's a "final girl" whose denouement horrifies in a modern, bloodless way. 

#### 8 Questions

**Ethan Hawke** The Oscar-nominated actor on directing movies, the state of modern romance and why he won't whine about getting older

hy did you want to direct Blaze, a movie about country musician

**Blaze Foley?** The trouble with most music biopics is that the subject is always wildly famous. And in real life, 98% of musicians are met with indifference. I was more interested in Blaze's life. There was no place for him in the commercial world.

Did Blaze help you work through your own views about how the pursuit of fame can be destructive? Absolutely. A lot of Blaze's music grew out of love for his wife. But later he drew on self-destructive behavior. Both of those experiences can create good art, but one is drawn from healthier water, and one is drawn from a poisonous well. And I've met so many people in my life who are unable to accept happiness.

Your new movie Juliet, Naked, like Before Sunrise and its sequels, presents a realistic relationship. What draws you to that type of story? You do society a disservice by filling up the airwaves with phony ideas of what romantic love looks like. In the Before trilogy, we really tried to make the most romantic film possible that doesn't have one lie in it. That was the appeal of Juliet, Naked to me too.

What do you make of the state of romance in film? Audiences are confused about what they want from the masculine-feminine dynamic. Romances have long played on stereotypes that people are uncomfortable with now. I think one of the reasons people have enjoyed the Before movies is that they don't have a masculine or feminine point of view—Julie [Delpy], Rick [Richard Linklater] and I are writing those together. Most romantic movies have a feminine perspective—Sleepless in Seattle or When Harry Met Sallyand then 90% of movies are made through the male gaze.

**6**YOU HAVE TO LET YOUR SUCCESSES GO IN THE SAME WAY YOU LET GO OF YOUR FAILURES



You recently played a priest who has an existential crisis about climate change in First Reformed. Did that character affect how you think about the world? [Writer-director] Paul Schrader said to me, "The best films start as you're walking out of the theater." What I love about First Reformed is it doesn't provide easy answers. It doesn't tell you how you're supposed to feel about death or climate change or faith. But it engages you to ask the questions.

Is that rare in the scripts you see? In my lifetime, there have been fewer and fewer movies that challenge you. Movies are doing the work for us. They tell us when our heart is supposed to pound because of the music cue, or the light hits the tear glistening in the corner of an actor's eye just the right way.

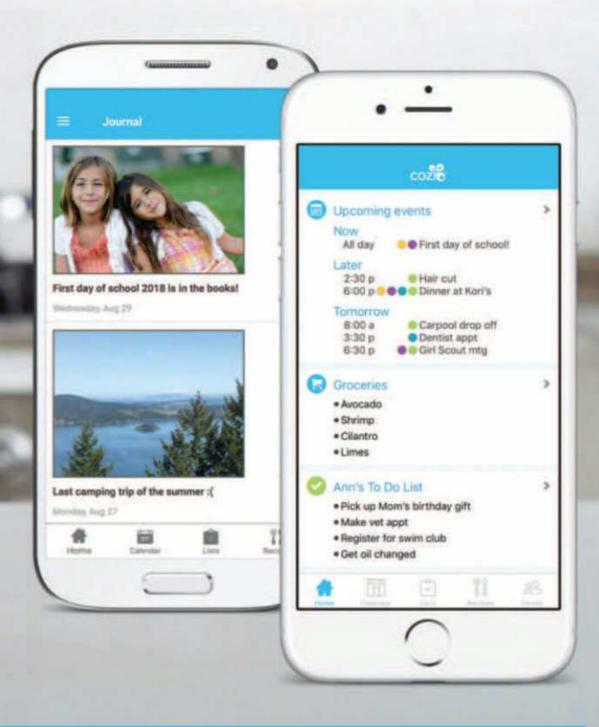
Schrader says he cast you because the lessons of life show on your face. Has aging changed the roles you play? People whine about getting older. But I used everything I've learned from years of acting to direct Blaze. And First Reformed was the best part I've ever had.

How do you maintain a long career?

I never try to do one type of movie. If you're going to have a long career making movies, you have to love it all—comedy, horror, tragedy. But you also have to let your successes go in the same way you let go of your failures. It's still hard for me. I get a script that says, "Eddie, age 19, skateboards down the street," and I think, That's my part, because those are the parts I read when I was starting out. But no, Eddie skateboards home and gets a sandwich from his dad, "mid-40s, ruffled, struggles to find the peanut butter." That's me now. A lot of people wake up and say, "Where did the time go?" As an actor that doesn't happen. You're constantly made aware of where you are in your life. If you hold on too tight to any one part, you atrophy. - ELIANA DOCKTERMAN



### One simple app to calm the chaos of back to school



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